

EXHIBIT 117

**11/30/16
CHROME
PRIVACY
NOTICE**

Google Chrome Privacy Notice

Archive date: November 30, 2016

Learn how to control the information that's collected, stored, and shared when you use the Google Chrome browser on your computer or mobile device, Chrome OS, and Safe Browsing. Although this policy describes features that are specific to Chrome, any personal information that is provided to Google or stored in your Google Account will be used and protected in accordance with the [Google Privacy Policy](#).

If you enable Google Play apps on your Chromebook, the use and protection of information collected by Google Play or the Android operating system is governed by the Play Terms of Service and Google Privacy Policy. Details specific to Chrome are provided in this Notice where relevant.

Details about the Privacy Notice

In this Privacy Notice, we use the term "Chrome" to refer to all the products in the Chrome family listed above. If there are differences in our policy between products, we'll point them out.

"Beta," "Dev," or "Canary" versions of Chrome let you test new features still being created in Chrome. This Privacy Notice applies to all versions of Chrome, but might not be up-to-date for features still under development.

For step-by-step guides to managing your privacy preferences, read [this overview of Chrome's privacy controls](#).

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Browser modes

You don't need to provide any personal information to use Chrome, but Chrome has different modes that you can use to change or improve your browsing experience. Privacy practices are different depending on the mode that you're using.

Basic browser mode

The basic browser mode stores information locally on your system. This information might include:

- Browsing history information. For example, Chrome stores the URLs of pages that you visit, a cache of text, images and other resources from those pages, and, if the [network actions prediction](#) feature is turned on, a list of some of the IP addresses linked from those pages.
- Personal information and passwords, to help you fill out forms or sign in to sites you visit.
- A list of permissions that you have granted to websites.
- Thumbnail-sized screenshots of pages that you visit most often.
- [Cookies](#) or data from websites that you visit.
- Data saved by add-ons.
- A record of what you downloaded from websites.

You can manage this information in several ways:

- You can [delete your browsing history information](#).
- You can clear your cookies and site data by visiting the Cookies and Site Data dialog at <chrome://settings/clearBrowserData>.

- You can stop Chrome from [accepting cookies](#) from Google or other sites. [Learn more](#).
- You can review stored passwords in Chrome settings. [Learn more](#).
- You can view and manage your stored Autofill information. [Learn more](#).

The personal information that Chrome stores won't be sent to Google unless you choose to store that data in your [Google Account](#) by signing in to Chrome. Signing in enables Chrome's [synchronization feature](#).

How Chrome handles your information

Information for website operators. Sites that you visit using Chrome will automatically receive [standard log information](#), including your system's IP address and data from [cookies](#) or [similar technologies](#). In general, the fact that you use Chrome to access Google services, such as Gmail, does not cause Google to receive any additional personally identifying information about you. On Google websites and other websites that opt in, if Chrome detects signs that you are being actively attacked by someone on the network (a "man in the middle attack"), Chrome may send information about that connection to Google or the website you visited to help determine the extent of the attack and how the attack functions. Google provides participating website owners with reports about attacks occurring on their sites.

Prerendering. To load web pages faster, Chrome has a setting that can look up the IP addresses of links on a web page and open network connections. Sites and Android apps can also ask the browser to preload the pages you might visit next. Preloading requests from Android apps are controlled by the same setting as Chrome-initiated predictions. But preloading instructions from sites are always performed, regardless of whether Chrome's network prediction feature is enabled. If prerendering is requested, whether by Chrome or by a site or app, the preloaded site is allowed to set and read its own cookies just as if you had visited it, even if you don't end up visiting the prerendered page. [Learn more](#).

Location. To get more geographically relevant information, Chrome gives you the option to share your location with a site. Chrome won't allow a site to access your location without your permission; however, on mobile devices, once you've granted the app permission to access your location, Chrome automatically shares your location with your default search engine. Chrome uses Google Location Services to estimate your location. The information that Chrome sends to Google Location Services may include:

- The Wi-Fi routers closest to you
- Cell IDs of the cell towers closest to you
- The strength of your Wi-Fi or cell signal
- The IP address that is currently assigned to your device

Google doesn't have control over third-party websites or their privacy practices, so be cautious when sharing your location with a website.

Updates. Chrome periodically sends information to Google to check for updates, get connectivity status, validate the current time, and estimate the number of active users.

Search features. When you search using the address bar in Chrome, the characters you type (even if you haven't hit "enter" yet) are sent to your default search engine. This allows your search engine to improve your searching and browsing experience by automatically suggesting terms or URLs you may be looking for. [Learn more](#). If Google is your default search engine, Chrome contacts Google when you start searching or when you change networks, so you can get the best local web address for sending search queries. If you are signed in to a Google site or signed in to Chrome and Google is your default search engine, searches you perform using the address bar in Chrome are stored in your Google account.

Suggestion service. Suggestions are based on related web searches, your browsing history, and popular websites. If your default search engine provides a suggestion service, the browser sends the text you type in the address bar to the search engine. [Learn more about the address bar prediction service](#).

Navigation assistance. When you can't connect to a web page, you can get suggestions for alternative pages similar to the one you're trying to reach. In order to offer you suggestions, Chrome sends Google the URL of the page you're trying to reach.

Autofill and password management. Chrome sends Google limited, anonymous information about the web forms that you encounter, including a hashed URL of the web page and details of the form's structure, so that we can improve our Autofill and password management services.

Payments. If you are signed in to the Chrome browser and you have credit cards stored in your Google Payments Account, then Chrome will offer you the option of filling those cards into web forms. In addition, if you enter a new credit card into a web form, Chrome will offer to save your credit card and related billing

Information to your Google Payments account. If you use a card from Google Payments or choose to save your credit card in your Google Payments account for future use, Chrome will collect information about your computer and share it with Google Payments to protect you from fraud. On Android, if supported by the merchant, Chrome will also allow you to pay using Android Pay.

Usage statistics and crash reports. By default, usage statistics and crash reports are sent to Google to help us improve our products. Usage statistics contain information such as preferences, button clicks, and memory usage. Usage statistics do not include web page URLs or personal information. Crash reports contain system information at the time of the crash, and may contain web page URLs or personal information, depending on what was happening at the time the crash report was triggered. We might share aggregated, non-personal information from crash reports with third parties. You can change whether usage statistics and crash reports are sent to Google at any time. [Learn more](#). If Google Play apps are enabled on your Chromebook and Chrome usage statistics are enabled, then Android diagnostic and usage data is also sent to Google.

Media licenses. Some websites encrypt media to protect against unauthorized access and copying. For HTML5 sites, this key exchange is done using the Encrypted Media Extensions API. In the process of allowing access to this media, session identifiers and licenses may be stored locally. These identifiers can be cleared by the user in Chrome using [Clear Browsing Data](#) with "Media licenses" enabled. For sites that use Adobe Flash Access, Chrome browser for Windows or Chrome OS, provides a unique identifier to content partners and websites. The identifier is stored on your system. You can deny this access in the settings under Content Settings, Protected content, and reset the ID using [Clear Browsing Data](#) with "Media licenses" enabled. If you access HD content on Chrome OS, a content provider may ask Chrome for a certificate to verify the eligibility of the device. To verify your device, your Chromebook will [share data about its hardware attributes](#) with the website, and will use [Verified Access](#) to certify that its cryptographic keys are protected by Chrome hardware. Chrome will prompt you to allow or deny this verification check. [Learn more](#).

Other Google services. This notice describes the Google services that are enabled by default in Chrome. In addition, Chrome may offer other Google web services. For example, if you encounter a page in a different language, Chrome will offer to send the text to Google for translation. You will be notified of your options for controlling these services when you first use them. You can find more information in the [Chrome Privacy Whitepaper](#).

Identifiers in Chrome

Chrome includes a number of identifiers necessary to power features. For example, if you use push messaging, an identifier is created in order to deliver notices to you. Where possible, we use non-unique identifiers and remove identifiers when they are no longer needed. Additionally, the following identifiers help us develop, distribute, and promote Chrome, but are not directly related to a Chrome feature.

- **Installation tracking.** Each copy of the Windows desktop version of the Chrome browser includes a temporary randomly generated installation number that is sent to Google when you install and first use Chrome. This temporary identifier helps us estimate the number of installed browsers, and will be deleted the first time Chrome updates. The mobile version of Chrome uses a variant of the device identifier on an ongoing basis to track the number of installations of Chrome.
- **Promotion tracking.** In order to help us track the success of promotional campaigns, Chrome generates a unique token that is sent to Google when you first run and use the browser. In addition, if you received or reactivated your copy of the desktop version of the Chrome browser as part of a promotional campaign and Google is your default search engine, then searches from the omnibox will include a non-unique promotional tag. All mobile versions of the Chrome browser also include a non-unique promotional tag with searches from the omnibox. Chrome OS may also send a non-unique promotional tag to Google periodically (including during initial setup) and when performing searches with Google. [Learn more](#).
- **Field trials.** We sometimes conduct limited tests of new features. Chrome includes a seed number that is randomly selected on first run to assign browsers to experiment groups. Experiments may also be limited by country (determined by your IP address), operating system, Chrome version, and other parameters. A list of field trials that are currently active on your installation of Chrome is included in all requests sent to Google. [Learn more](#).

Signed-in Chrome mode

When you sign in to the Chrome browser or a Chromebook with your [Google Account](#), your personal browsing data is saved on Google's servers and synced with your account. This type of information can include:

- Browsing history
- Bookmarks
- Tabs
- Passwords and Autofill information

- Other browser settings, like installed extensions

These settings are automatically loaded for you anytime you sign in to Chrome on other computers and devices. To customize the specific information that you synchronize, use the "Settings" menu. [Learn more](#). You can see the amount of Chrome data stored for your Google Account and manage it on the [Chrome Sync Dashboard](#). On the Dashboard, you can also disable synchronization completely and delete all the associated data from Google's servers. [Learn more](#).

How Chrome handles your signed-in information

When you sync Chrome with your Google Account, we use your browsing data to improve and personalize your experience within Chrome. You can also personalize your experience on other Google products, by allowing your Chrome history to be included in your Google Web & App Activity. [Learn more](#).

You can change this setting on your [Account History](#) page or [manage your private data](#) whenever you like. If you don't use your Chrome data to personalize your Google experience outside of Chrome, Google will only use your Chrome data after it's anonymized and aggregated with data from other users. Google uses this data to develop new features, products, and services, and to improve the overall quality of existing products and services. If you would like to use Google's cloud to store and sync your Chrome data but you don't want Google to access the data, you can encrypt all of your synced data with your own sync passphrase. [Learn more](#).

Incognito mode and guest mode

You can limit the information Chrome stores on your system by using [incognito mode or guest mode](#). In these modes, Chrome won't store certain information, such as:

- Basic browsing history information like URLs, cached page text, or IP addresses of pages linked from the websites you visit
- Snapshots of pages that you visit
- Records of your downloads, although the files you download will still be stored elsewhere on your computer or device

How Chrome handles your incognito or guest information

Cookies. Chrome won't share existing cookies with sites you visit in incognito or guest mode. Sites may deposit new [cookies](#) on your system while you are in these modes, but they'll only be stored and transmitted

until you close the last incognito or guest window.

Browser configuration changes. When you make changes to your browser configuration, like bookmarking a web page or changing your settings, this information is saved. These changes are not affected by incognito or guest mode.

Permissions. Permissions you grant in incognito mode are not saved to your existing profile.

Profile information. In incognito mode, you will still have access to information from your existing profile, such as suggestions based on your browsing history and saved passwords, while you are browsing. In guest mode, you can browse without seeing information from any existing profiles.

Managing Users in Chrome

Managing users for personal Chrome use

You can set up personalized versions of Chrome for users sharing one device or computer. Note that anyone with access to your device can view all the information in all profiles. To truly protect your data from being seen by others, use the built-in user accounts in your operating system. [Learn more](#).

You can also create a supervised user in Chrome with your Google Account. If you do, Google will synchronize and store information about the supervised user, like history and other settings, with your Google Account. You can view this information at chrome.com/manage.

Managing users on Chrome for Enterprise

Some Chrome browsers or Chromebooks are managed by a school or company. In that case, the administrator has the ability to apply policies to the browser or Chromebook. Chrome contacts Google to check for these policies when a user first signs in to Chrome or starts browsing without signing in (except in guest mode). Chrome checks periodically for updates to policies.

An administrator can set up a policy for status and activity reporting for Chrome, including location information for Chrome OS devices. Your administrators may also have the ability to access, monitor, use or disclose data accessed from your managed device.

Safe Browsing practices

Google Chrome and certain third-party browsers, like some versions of Mozilla Firefox and Apple's Safari, include Google's Safe Browsing feature. With Safe Browsing, information about suspicious websites is sent and received between the browser you are using and Google's servers.

How Safe Browsing works

Your browser contacts Google's servers periodically to download the most recent "Safe Browsing" list, which contains known phishing and malware sites. The most recent copy of the list is stored locally on your system. Google doesn't collect any account information or other personally identifying information as part of this contact. However, it does receive standard log information, including an IP address and cookies.

Each site you visit is checked against the Safe Browsing list on your system. If there's a match, your browser sends Google a hashed, partial copy of the site's URL so that Google can send more information to your browser. Google cannot determine the real URL from this information. [Learn more](#).

The following Safe Browsing features are specific to Chrome:

- Some versions of Chrome feature Safe Browsing technology that can identify potentially harmful sites and potentially dangerous file types not already known by Google. The full URL of the site or potentially dangerous file might also be sent to Google to help determine whether the site or file is harmful.
- Chrome uses Safe Browsing technology to scan your computer periodically, in order to detect unwanted software that prevents you from changing your settings or otherwise interferes with the security and stability of your browser. [Learn more](#). If this kind of software is detected, Chrome might offer you the option to download the Chrome Cleanup Tool to remove it.

- You can choose to send additional data to help improve Safe Browsing when you access a site that appears to contain malware or when Chrome detects unwanted software on your computer. This data is sent when you close or navigate away from a Safe Browsing warning page or when Chrome detects unwanted software on your computer following a periodic scan. The reports contain various data, like metadata for files and registry entries that correspond to potentially unwanted software detected during scanning, the potentially dangerous file you encountered, the URL and contents of the website, and the URL of the page that directed you to that site.
 - If you are a Safe Browsing user and you are syncing your Chrome browsing history to your Google account, then, to improve the safety and utility of web feature permissions, Chrome may anonymously report the domains on which you grant, reject, and revoke permissions, or ignore or dismiss permission prompts.
 - You can always choose to disable the Safe Browsing feature within Chrome.
-

Privacy practices of apps, extensions, themes, services, and other add-ons

You can use apps, extensions, themes, services and other add-ons with Chrome, including some that may be preinstalled or integrated with Chrome. Add-ons developed and provided by Google may communicate with Google servers and are subject to the [Google Privacy Policy](#) unless otherwise indicated. Add-ons developed and provided by others are the responsibility of the add-on creators and may have different privacy policies.

Managing add-ons

Before installing an add-on, you should review the requested permissions. Add-ons can have permission to do various things, like:

- Store, access, and share data stored locally or in your Google Drive account
- View and access content on websites you visit
- Use notifications that are sent through Google servers

Chrome can interact with add-ons in a few different ways:

- Checking for updates
- Downloading and installing updates
- Sending usage indicators to Google about the add-ons

Some add-ons might require access to a unique identifier for digital rights management or for delivery of push messaging. You can disable the use of identifiers by removing the add-on from Chrome.

From time to time, Google might discover an add-on that poses a security threat, violates the developer terms for Chrome Web Store, or violates other legal agreements, laws, regulations, or policies. Chrome periodically downloads a list of these dangerous add-ons, in order to remotely disable or remove them from your system.

More information

Information that Google receives when you use Chrome is used and protected under the [Google Privacy Policy](#). Information that other website operators and add-on developers receive, including [cookies](#), is subject to the privacy policies of those websites.

Google adheres to several self-regulatory frameworks, including the US-EU Safe Harbor Framework and the US-Swiss Safe Harbor Framework as set forth by the US Department of Commerce. [Learn more](#).

Definitions

Cookies and similar technologies

A cookie is a small file containing a string of characters that is sent to your computer when you visit a website. When you visit the website again, the cookie allows that site to recognize your browser. Cookies may store user preferences and other information. You can reset your browser to refuse all cookies or to indicate when a cookie is being sent. However, some website features or services may not function properly without cookies. Other technologies are used for similar purposes as a cookie on other platforms where cookies are not available or applicable, such as the Advertising ID available on Android mobile devices. Learn more about [how Google uses cookies](#) and how Google uses data, including cookies, [when you use our partners' sites or apps](#).

Google Account

You may access some of our services by signing up for a [Google Account](#) and providing us with some personal information (typically your name, email address and a password). This account information will be used to authenticate you when you access Google services and protect your account from unauthorized access by others. You can edit or terminate your account at any time through your Google Account settings.

Server logs

Like most websites, our servers automatically record the page requests made when you visit our sites. These "server logs" typically include your web request, Internet Protocol address, browser type, browser language, the date and time of your request and one or more cookies that may uniquely identify your browser.

Here is an example of a typical log entry where the search is for "cars", followed by a breakdown of its parts:

```
123.45.67.89 - 25/Mar/2003 10:15:32 -
https://www.google.com/search?q=cars -
Firefox 1.0.7; Windows NT 5.1 - 740674ce2123e969
```

- **123.45.67.89** is the Internet Protocol address assigned to the user by the user's ISP; depending on the user's service, a different address may be assigned to the user by their service provider each time they connect to the Internet;
- **25/Mar/2003 10:15:32** is the date and time of the query;
- **<https://www.google.com/search?q=cars>** is the requested URL, including the search query;
- **Firefox 1.0.7; Windows NT 5.1** is the browser and operating system being used; and
- **740674ce2123e969** is the unique cookie ID assigned to this particular computer the first time it visited Google. (Cookies can be deleted by users. If the user has deleted the cookie from the computer since the last time s/he visited Google, then it will be the unique cookie ID assigned to the user the next time s/he visits Google from that particular computer).

EXHIBIT 118

**1/24/17
CHROME
PRIVACY
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Archive date: January 24, 2017

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Information to your Google Payments account. If you use a card from Google Payments or choose to save your credit card in your Google Payments account for future use, Chrome will collect information about your computer and share it with Google Payments to protect you from fraud. On Android, if supported by the merchant, Chrome will also allow you to pay using Android Pay.

Usage statistics and crash reports. By default, usage statistics and crash reports are sent to Google to help us improve our products. Usage statistics contain information such as preferences, button clicks, and memory usage. Usage statistics do not include web page URLs or personal information. Crash reports contain system information at the time of the crash, and may contain web page URLs or personal information, depending on what was happening at the time the crash report was triggered. We might share aggregated, non-personal information from crash reports with third parties. You can change whether usage statistics and crash reports are sent to Google at any time. [Learn more](#). If Google Play apps are enabled on your Chromebook and Chrome usage statistics are enabled, then Android diagnostic and usage data is also sent to Google.

Media licenses. Some websites encrypt media to protect against unauthorized access and copying. For HTML5 sites, this key exchange is done using the Encrypted Media Extensions API. In the process of allowing access to this media, session identifiers and licenses may be stored locally. These identifiers can be cleared by the user in Chrome using [Clear Browsing Data](#) with "Media licenses" enabled. For sites that use Adobe Flash Access, Chrome browser for Windows or Chrome OS, provides a unique identifier to content partners and websites. The identifier is stored on your system. You can deny this access in the settings under Content Settings, Protected content, and reset the ID using [Clear Browsing Data](#) with "Media licenses" enabled. If you access HD content on Chrome OS, a content provider may ask Chrome for a certificate to verify the eligibility of the device. To verify your device, your Chromebook will [share data about its hardware attributes](#) with the website, and will use [Verified Access](#) to certify that its cryptographic keys are protected by Chrome hardware. Chrome will prompt you to allow or deny this verification check. [Learn more](#).

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How Chrome handles your signed-in information

When you sync Chrome with your Google Account, we use your browsing data to improve and personalize your experience within Chrome. You can also personalize your experience on other Google products, by allowing your Chrome history to be included in your Google Web & App Activity. [Learn more](#).

You can change this setting on your [Account History](#) page or [manage your private data](#) whenever you like. If you don’t use your Chrome data to personalize your Google experience outside of Chrome, Google will only use your Chrome data after it’s anonymized and aggregated with data from other users. Google uses this data to develop new features, products, and services, and to improve the overall quality of existing products and services. If you would like to use Google’s cloud to store and sync your Chrome data but you don’t want Google to access the data, you can encrypt all of your synced data with your own sync passphrase. [Learn more](#).

Incognito mode and guest mode

You can limit the information Chrome stores on your system by using [incognito mode or guest mode](#). In these modes, Chrome won’t store certain information, such as:

- Basic browsing history information like URLs, cached page text, or IP addresses of pages linked from the websites you visit
- Snapshots of pages that you visit
- Records of your downloads, although the files you download will still be stored elsewhere on your computer or device

How Chrome handles your incognito or guest information

Cookies. Chrome won’t share existing cookies with sites you visit in incognito or guest mode. Sites may deposit new [cookies](#) on your system while you are in these modes, but they’ll only be stored and transmitted

until you close the last incognito or guest window.

Browser configuration changes. When you make changes to your browser configuration, like bookmarking a web page or changing your settings, this information is saved. These changes are not affected by incognito or guest mode.

Permissions. Permissions you grant in incognito mode are not saved to your existing profile.

Profile information. In incognito mode, you will still have access to information from your existing profile, such as suggestions based on your browsing history and saved passwords, while you are browsing. In guest mode, you can browse without seeing information from any existing profiles.

Managing Users in Chrome

Managing users for personal Chrome use

You can set up personalized versions of Chrome for users sharing one device or computer. Note that anyone with access to your device can view all the information in all profiles. To truly protect your data from being seen by others, use the built-in user accounts in your operating system. [Learn more](#).

You can also create a supervised user in Chrome with your Google Account. If you do, Google will synchronize and store information about the supervised user, like history and other settings, with your Google Account. You can view this information at chrome.com/manage.

Managing users on Chrome for Enterprise

Some Chrome browsers or Chromebooks are managed by a school or company. In that case, the administrator has the ability to apply policies to the browser or Chromebook. Chrome contacts Google to check for these policies when a user first signs in to Chrome or starts browsing without signing in (except in guest mode). Chrome checks periodically for updates to policies.

An administrator can set up a policy for status and activity reporting for Chrome, including location information for Chrome OS devices. Your administrators may also have the ability to access, monitor, use or disclose data accessed from your managed device.

Safe Browsing practices

Google Chrome and certain third-party browsers, like some versions of Mozilla Firefox and Apple's Safari, include Google's Safe Browsing feature. With Safe Browsing, information about suspicious websites is sent and received between the browser you are using and Google's servers.

How Safe Browsing works

Your browser contacts Google's servers periodically to download the most recent "Safe Browsing" list, which contains known phishing and malware sites. The most recent copy of the list is stored locally on your system. Google doesn't collect any account information or other personally identifying information as part of this contact. However, it does receive standard log information, including an IP address and cookies.

Each site you visit is checked against the Safe Browsing list on your system. If there's a match, your browser sends Google a hashed, partial copy of the site's URL so that Google can send more information to your browser. Google cannot determine the real URL from this information. [Learn more](#).

The following Safe Browsing features are specific to Chrome:

- Some versions of Chrome feature Safe Browsing technology that can identify potentially harmful sites and potentially dangerous file types not already known by Google. The full URL of the site or potentially dangerous file might also be sent to Google to help determine whether the site or file is harmful.
- Chrome uses Safe Browsing technology to scan your computer periodically, in order to detect unwanted software that prevents you from changing your settings or otherwise interferes with the security and stability of your browser. [Learn more](#). If this kind of software is detected, Chrome might offer you the option to download the Chrome Cleanup Tool to remove it.

- You can choose to send additional data to help improve Safe Browsing when you access a site that appears to contain malware or when Chrome detects unwanted software on your computer. [Learn more](#).
 - If you are a Safe Browsing user and you are syncing your Chrome browsing history to your Google account, then, to improve the safety and utility of web feature permissions, Chrome may anonymously report the domains on which you grant, reject, and revoke permissions, or ignore or dismiss permission prompts.
 - You can always choose to [disable the Safe Browsing feature within Chrome](#).
-

Privacy practices of apps, extensions, themes, services, and other add-ons

You can use apps, extensions, themes, services and other add-ons with Chrome, including some that may be preinstalled or integrated with Chrome. Add-ons developed and provided by Google may communicate with Google servers and are subject to the [Google Privacy Policy](#) unless otherwise indicated. Add-ons developed and provided by others are the responsibility of the add-on creators and may have different privacy policies.

Managing add-ons

Before installing an add-on, you should review the requested permissions. Add-ons can have permission to do various things, like:

- Store, access, and share data stored locally or in your Google Drive account
- View and access content on websites you visit
- Use notifications that are sent through Google servers

Chrome can interact with add-ons in a few different ways:

- Checking for updates
- Downloading and installing updates
- Sending usage indicators to Google about the add-ons

Some add-ons might require access to a unique identifier for digital rights management or for delivery of push messaging. You can disable the use of identifiers by removing the add-on from Chrome.

From time to time, Google might discover an add-on that poses a security threat, violates the developer terms for Chrome Web Store, or violates other legal agreements, laws, regulations, or policies. Chrome periodically downloads a list of these dangerous add-ons, in order to remotely disable or remove them from your system.

More information

Information that Google receives when you use Chrome is used and protected under the [Google Privacy Policy](#). Information that other website operators and add-on developers receive, including [cookies](#), is subject to the privacy policies of those websites.

Google adheres to several self-regulatory frameworks, including the US-EU Safe Harbor Framework and the US-Swiss Safe Harbor Framework as set forth by the US Department of Commerce. [Learn more](#).

Definitions

Cookies and similar technologies

A cookie is a small file containing a string of characters that is sent to your computer when you visit a website. When you visit the website again, the cookie allows that site to recognize your browser. Cookies may store user preferences and other information. You can reset your browser to refuse all cookies or to indicate when a cookie is being sent. However, some website features or services may not function properly without cookies. Other technologies are used for similar purposes as a cookie on other platforms where cookies are not available or applicable, such as the Advertising ID available on Android mobile devices. Learn more about [how Google uses cookies](#) and how Google uses data, including cookies, [when you use our partners' sites or apps](#).

Google Account

You may access some of our services by signing up for a [Google Account](#) and providing us with some personal information (typically your name, email address and a password). This account information will be

used to authenticate you when you access Google services and protect your account from unauthorized access by others. You can edit or terminate your account at any time through your Google Account settings.

Server logs

Like most websites, our servers automatically record the page requests made when you visit our sites. These "server logs" typically include your web request, Internet Protocol address, browser type, browser language, the date and time of your request and one or more cookies that may uniquely identify your browser.

Here is an example of a typical log entry where the search is for "cars", followed by a breakdown of its parts:

```
123.45.67.89 - 25/Mar/2003 10:15:32 -
https://www.google.com/search?q=cars -
Firefox 1.0.7; Windows NT 5.1 - 740674ce2123e969
```

- **123.45.67.89** is the Internet Protocol address assigned to the user by the user's ISP; depending on the user's service, a different address may be assigned to the user by their service provider each time they connect to the Internet;
- **25/Mar/2003 10:15:32** is the date and time of the query;
- **<https://www.google.com/search?q=cars>** is the requested URL, including the search query;
- **Firefox 1.0.7; Windows NT 5.1** is the browser and operating system being used; and
- **740674ce2123e969** is the unique cookie ID assigned to this particular computer the first time it visited Google. (Cookies can be deleted by users. If the user has deleted the cookie from the computer since the last time s/he visited Google, then it will be the unique cookie ID assigned to the user the next time s/he visits Google from that particular computer).

EXHIBIT 119

**3/7/17
CHROME
PRIVACY
NOTICE**

Google Chrome Privacy Notice

Archive date: March 7, 2017

Learn how to control the information that's collected, stored, and shared when you use the Google Chrome browser on your computer or mobile device, Chrome OS, and Safe Browsing. Although this policy describes features that are specific to Chrome, any personal information that is provided to Google or stored in your Google Account will be used and protected in accordance with the [Google Privacy Policy](#).

If you enable Google Play apps on your Chromebook, the use and protection of information collected by Google Play or the Android operating system is governed by the Play Terms of Service and Google Privacy Policy. Details specific to Chrome are provided in this Notice where relevant.

Details about the Privacy Notice

In this Privacy Notice, we use the term "Chrome" to refer to all the products in the Chrome family listed above. If there are differences in our policy between products, we'll point them out.

"Beta," "Dev," or "Canary" versions of Chrome let you test new features still being created in Chrome. This Privacy Notice applies to all versions of Chrome, but might not be up-to-date for features still under development.

For step-by-step guides to managing your privacy preferences, read [this overview of Chrome's privacy controls](#).

Table of contents:

- [Browser modes](#)
- [Managing users in Chrome](#)
- [Safe Browsing policies](#)
- [Policy on using apps, extensions, themes, services, and other add-ons](#)
- [Server log privacy information](#)
- [More information](#)

Browser modes

You don't need to provide any personal information to use Chrome, but Chrome has different modes that you can use to change or improve your browsing experience. Privacy practices are different depending on the mode that you're using.

Basic browser mode

The basic browser mode stores information locally on your system. This information might include:

- Browsing history information. For example, Chrome stores the URLs of pages that you visit, a cache of text, images and other resources from those pages, and, if the [network actions prediction](#) feature is turned on, a list of some of the IP addresses linked from those pages.
- Personal information and passwords, to help you fill out forms or sign in to sites you visit.
- A list of permissions that you have granted to websites.
- Thumbnail-sized screenshots of pages that you visit most often.
- [Cookies](#) or data from websites that you visit.
- Data saved by add-ons.
- A record of what you downloaded from websites.

You can manage this information in several ways:

- You can [delete your browsing history information](#).
- You can clear your cookies and site data by visiting the Cookies and Site Data dialog at <chrome://settings/clearBrowserData>.

- You can stop Chrome from accepting cookies from Google or other sites. [Learn more](#).
- You can review stored passwords in Chrome settings. [Learn more](#).
- You can view and manage your stored Autofill information. [Learn more](#).

The personal information that Chrome stores won't be sent to Google unless you choose to store that data in your [Google Account](#) by signing in to Chrome. Signing in enables Chrome's [synchronization feature](#).

How Chrome handles your information

Information for website operators. Sites that you visit using Chrome will automatically receive [standard log information](#), including your system's IP address and data from [cookies](#) or [similar technologies](#). In general, the fact that you use Chrome to access Google services, such as Gmail, does not cause Google to receive any additional personally identifying information about you. On Google websites and other websites that opt in, if Chrome detects signs that you are being actively attacked by someone on the network (a "man in the middle attack"), Chrome may send information about that connection to Google or the website you visited to help determine the extent of the attack and how the attack functions. Google provides participating website owners with reports about attacks occurring on their sites.

Prerendering. To load web pages faster, Chrome has a setting that can look up the IP addresses of links on a web page and open network connections. Sites and Android apps can also ask the browser to preload the pages you might visit next. Preloading requests from Android apps are controlled by the same setting as Chrome-initiated predictions. But preloading instructions from sites are always performed, regardless of whether Chrome's network prediction feature is enabled. If prerendering is requested, whether by Chrome or by a site or app, the preloaded site is allowed to set and read its own cookies just as if you had visited it, even if you don't end up visiting the prerendered page. [Learn more](#).

Location. To get more geographically relevant information, Chrome gives you the option to share your location with a site. Chrome won't allow a site to access your location without your permission; however, on mobile devices, Chrome automatically shares your location with your default search engine if the Chrome app has permission to access your location and you haven't blocked geolocation for the associated web site. Chrome uses Google Location Services to estimate your location. The information that Chrome sends to Google Location Services may include:

- The Wi-Fi routers closest to you
- Cell IDs of the cell towers closest to you
- The strength of your Wi-Fi or cell signal
- The IP address that is currently assigned to your device

Google doesn't have control over third-party websites or their privacy practices, so be cautious when sharing your location with a website.

Updates. Chrome periodically sends information to Google to check for updates, get connectivity status, validate the current time, and estimate the number of active users.

Search features. If Google is your default search engine, Chrome contacts Google when you start searching or when you change networks, so you can get the best local web address for sending search queries. If you are signed in to a Google site or signed in to Chrome and Google is your default search engine, searches you perform using the address bar in Chrome are stored in your Google account.

Search prediction service. To help you find information faster, Chrome uses the prediction service provided by your default search engine to offer likely completions to the text you are typing. When you search using the address bar in Chrome, the characters you type (even if you haven't hit "enter" yet) are sent to your default search engine. If Google is your default search engine, predictions are based on your own search history, topics related to what you're typing and what other people are searching for. [Learn more](#). Predictions can also be based on your browsing history. [Learn more](#).

Navigation assistance. When you can't connect to a web page, you can get suggestions for alternative pages similar to the one you're trying to reach. In order to offer you suggestions, Chrome sends Google the URL of the page you're trying to reach.

Autofill and password management. Chrome sends Google limited, anonymous information about the web forms that you encounter, including a hashed URL of the web page and details of the form's structure, so that we can improve our Autofill and password management services.

Payments. If you are signed in to the Chrome browser and you have credit cards stored in your Google Payments Account, then Chrome will offer you the option of filling those cards into web forms. In addition, if you enter a new credit card into a web form, Chrome will offer to save your credit card and related billing

Information to your Google Payments account. If you use a card from Google Payments or choose to save your credit card in your Google Payments account for future use, Chrome will collect information about your computer and share it with Google Payments to protect you from fraud. On Android, if supported by the merchant, Chrome will also allow you to pay using Android Pay.

Language. In order to customize your browsing experience based on languages that you prefer to read, Chrome will keep a count of the most popular languages of the sites you visited. This language preference will be sent to Google to customize your experience in Chrome. If you are signed in to Chrome, this language profile will be associated with your Google Account and, if you include Chrome history in your Google Web & App Activity, may be used to personalize your experience in other Google products. [View Activity Controls](#).

Web Apps on Android. On Android devices, if you select "add to homescreen" for a website that has been optimized for [fast, reliable performance on mobile devices](#), then Chrome will use a Google server to create a native Android package for that web site on your device. The Android package allows you to interact with the web app as you would with an Android app. For example, the web app will appear in your list of installed apps. [Learn more](#).

Usage statistics and crash reports. By default, usage statistics and crash reports are sent to Google to help us improve our products. Usage statistics contain information such as preferences, button clicks, and memory usage. Usage statistics do not include web page URLs or personal information. Crash reports contain system information at the time of the crash, and may contain web page URLs or personal information, depending on what was happening at the time the crash report was triggered. We might share aggregated, non-personal information from crash reports with third parties. You can change whether usage statistics and crash reports are sent to Google at any time. [Learn more](#). If Google Play apps are enabled on your Chromebook and Chrome usage statistics are enabled, then Android diagnostic and usage data is also sent to Google.

Media licenses. Some websites encrypt media to protect against unauthorized access and copying. For HTML5 sites, this key exchange is done using the Encrypted Media Extensions API. In the process of allowing access to this media, session identifiers and licenses may be stored locally. These identifiers can be cleared by the user in Chrome using [Clear Browsing Data](#) with "Media licenses" enabled. For sites that use Adobe Flash Access, Chrome browser for Windows or Chrome OS, provides a unique identifier to content partners and websites. The identifier is stored on your system. You can deny this access in the settings under Content Settings, Protected content, and reset the ID using [Clear Browsing Data](#) with "Media licenses" enabled. If you access HD content on Chrome OS, a content provider may ask Chrome for a certificate to verify the eligibility of

the device. To verify your device, your Chromebook will share data about its hardware attributes with the website, and will use Verified Access to certify that its cryptographic keys are protected by Chrome hardware. Chrome will prompt you to allow or deny this verification check. Learn more.

Other Google services. This notice describes the Google services that are enabled by default in Chrome. In addition, Chrome may offer other Google web services. For example, if you encounter a page in a different language, Chrome will offer to send the text to Google for translation. You will be notified of your options for controlling these services when you first use them. You can find more information in the Chrome Privacy Whitepaper.

Identifiers in Chrome

Chrome includes a number of identifiers necessary to power features. For example, if you use push messaging, an identifier is created in order to deliver notices to you. Where possible, we use non-unique identifiers and remove identifiers when they are no longer needed. Additionally, the following identifiers help us develop, distribute, and promote Chrome, but are not directly related to a Chrome feature.

- **Installation tracking.** Each copy of the Windows desktop version of the Chrome browser includes a temporary randomly generated installation number that is sent to Google when you install and first use Chrome. This temporary identifier helps us estimate the number of installed browsers, and will be deleted the first time Chrome updates. The mobile version of Chrome uses a variant of the device identifier on an ongoing basis to track the number of installations of Chrome.
- **Promotion tracking.** In order to help us track the success of promotional campaigns, Chrome generates a unique token that is sent to Google when you first run and use the browser. In addition, if you received or reactivated your copy of the desktop version of the Chrome browser as part of a promotional campaign and Google is your default search engine, then searches from the omnibox will include a non-unique promotional tag. All mobile versions of the Chrome browser also include a non-unique promotional tag with searches from the omnibox. Chrome OS may also send a non-unique promotional tag to Google periodically (including during initial setup) and when performing searches with Google. Learn more
- **Field trials.** We sometimes conduct limited tests of new features. Chrome includes a seed number that is randomly selected on first run to assign browsers to experiment groups. Experiments may also be limited by country (determined by your IP address), operating system, Chrome version, and other

parameters. A list of field trials that are currently active on your installation of Chrome is included in all requests sent to Google. [Learn more](#).

Signed-in Chrome mode

When you sign in to the Chrome browser or a Chromebook with your [Google Account](#), your personal browsing data is saved on Google's servers and synced with your account. This type of information can include:

- Browsing history
- Bookmarks
- Tabs
- Passwords and Autofill information
- Other browser settings, like installed extensions

These settings are automatically loaded for you anytime you sign in to Chrome on other computers and devices. To customize the specific information that you synchronize, use the "Settings" menu. [Learn more](#). You can see the amount of Chrome data stored for your Google Account and manage it on the [Chrome Sync Dashboard](#). On the Dashboard, you can also disable synchronization completely and delete all the associated data from Google's servers. [Learn more](#).

How Chrome handles your signed-in information

When you sync Chrome with your Google Account, we use your browsing data to improve and personalize your experience within Chrome. You can also personalize your experience on other Google products, by allowing your Chrome history to be included in your Google Web & App Activity. [Learn more](#).

You can change this setting on your [Account History](#) page or [manage your private data](#) whenever you like. If you don't use your Chrome data to personalize your Google experience outside of Chrome, Google will only use your Chrome data after it's anonymized and aggregated with data from other users. Google uses this data to develop new features, products, and services, and to improve the overall quality of existing products and services. If you would like to use Google's cloud to store and sync your Chrome data but you don't want Google to access the data, you can encrypt all of your synced data with your own sync passphrase. [Learn more](#).

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How Chrome handles your incognito or guest information

Cookies. Chrome won't share existing cookies with sites you visit in incognito or guest mode. Sites may deposit new [cookies](#) on your system while you are in these modes, but they'll only be stored and transmitted until you close the last incognito or guest window.

Browser configuration changes. When you make changes to your browser configuration, like bookmarking a web page or changing your settings, this information is saved. These changes are not affected by incognito or guest mode.

Permissions. Permissions you grant in incognito mode are not saved to your existing profile.

Profile information. In incognito mode, you will still have access to information from your existing profile, such as suggestions based on your browsing history and saved passwords, while you are browsing. In guest mode, you can browse without seeing information from any existing profiles.

Managing Users in Chrome

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 - You can choose to send additional data to help improve Safe Browsing when you access a site that appears to contain malware or when Chrome detects unwanted software on your computer. [Learn more](#).
 - If you are a Safe Browsing user and you are syncing your Chrome browsing history to your Google account, then, to improve the safety and utility of web feature permissions, Chrome may anonymously report the domains on which you grant, reject, and revoke permissions, or ignore or dismiss permission prompts.
 - You can always choose to [disable the Safe Browsing feature within Chrome](#).
-

Privacy practices of apps, extensions, themes, services, and other add-ons

You can use apps, extensions, themes, services and other add-ons with Chrome, including some that may be preinstalled or integrated with Chrome. Add-ons developed and provided by Google may communicate with Google servers and are subject to the [Google Privacy Policy](#) unless otherwise indicated. Add-ons developed and provided by others are the responsibility of the add-on creators and may have different privacy policies.

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More information

Information that Google receives when you use Chrome is used and protected under the [Google Privacy Policy](#). Information that other website operators and add-on developers receive, including [cookies](#), is subject to the privacy policies of those websites.

Google adheres to several self regulatory frameworks, including the EU-US Privacy Shield Framework. [Learn more](#).

Definitions

Cookies and similar technologies

A cookie is a small file containing a string of characters that is sent to your computer when you visit a website. When you visit the website again, the cookie allows that site to recognize your browser. Cookies may store user preferences and other information. You can reset your browser to refuse all cookies or to indicate when a

cookie is being sent. However, some website features or services may not function properly without cookies. Other technologies are used for similar purposes as a cookie on other platforms where cookies are not available or applicable, such as the Advertising ID available on Android mobile devices. Learn more about [how Google uses cookies](#) and how Google uses data, including cookies, [when you use our partners' sites or apps](#).

Google Account

You may access some of our services by signing up for a [Google Account](#) and providing us with some personal information (typically your name, email address and a password). This account information will be used to authenticate you when you access Google services and protect your account from unauthorized access by others. You can edit or terminate your account at any time through your Google Account settings.

Server logs

Like most websites, our servers automatically record the page requests made when you visit our sites. These "server logs" typically include your web request, Internet Protocol address, browser type, browser language, the date and time of your request and one or more cookies that may uniquely identify your browser.

Here is an example of a typical log entry where the search is for "cars", followed by a breakdown of its parts:

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Firefox 1.0.7; Windows NT 5.1 - 740674ce2123e969
```

- **123.45.67.89** is the Internet Protocol address assigned to the user by the user's ISP; depending on the user's service, a different address may be assigned to the user by their service provider each time they connect to the Internet;
- **25/Mar/2003 10:15:32** is the date and time of the query;
- **<https://www.google.com/search?q=cars>** is the requested URL, including the search query;
- **Firefox 1.0.7; Windows NT 5.1** is the browser and operating system being used; and

- 740674ce2123a969 is the unique cookie ID assigned to this particular computer the first time it visited Google. (Cookies can be deleted by users. If the user has deleted the cookie from the computer since the last time s/he visited Google, then it will be the unique cookie ID assigned to the user the next time s/he visits Google from that particular computer).

EXHIBIT 120

**4/25/17
CHROME
PRIVACY
NOTICE**

Google Chrome

This is an archived version of the Chrome privacy notice. [View the current privacy notice.](#)

Google Chrome Privacy Notice

Archive date: April 25, 2017

Learn how to control the information that's collected, stored, and shared when you use the Google Chrome browser on your computer or mobile device, Chrome OS, and Safe Browsing. Although this policy describes features that are specific to Chrome, any personal information that is provided to Google or stored in your Google Account will be used and protected in accordance with the [Google Privacy Policy](#).

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- A list of permissions that you have granted to websites.
- Thumbnail-sized screenshots of pages that you visit most often.
- [Cookies](#) or data from websites that you visit.
- Data saved by add-ons.
- A record of what you downloaded from websites.

You can manage this information in several ways:

- You can [delete your browsing history information](#).

- You can clear your cookies and site data by visiting the Cookies and Site Data dialog at chrome://settings/clearBrowserData.
- You can stop Chrome from accepting cookies from Google or other sites. [Learn more](#).
- You can review stored passwords in Chrome settings. [Learn more](#).
- You can view and manage your stored Autofill information. [Learn more](#).

The personal information that Chrome stores won't be sent to Google unless you choose to store that data in your [Google Account](#) by signing in to Chrome. Signing in enables Chrome's [synchronization feature](#).

How Chrome handles your information

Information for website operators. Sites that you visit using Chrome will automatically receive [standard log information](#), including your system's IP address and data from [cookies or similar technologies](#). In general, the fact that you use Chrome to access Google services, such as Gmail, does not cause Google to receive any additional personally identifying information about you. On Google websites and other websites that opt in, if Chrome detects signs that you are being actively attacked by someone on the network (a "man in the middle attack"), Chrome may send information about that connection to Google or the website you visited to help determine the extent of the attack and how the attack functions. Google provides participating website owners with reports about attacks occurring on their sites.

Prerendering. To load web pages faster, Chrome has a setting that can look up the IP addresses of links on a web page and open network connections. Sites and Android apps can also ask the browser to preload the pages you might visit next. Preloading requests from Android apps are controlled by the same setting as Chrome-initiated predictions. But preloading instructions from sites are always performed, regardless of whether Chrome's network prediction feature is enabled. If prerendering is requested, whether by Chrome or by a site or app, the preloaded site is allowed to set and read its own cookies just as if you had visited it, even if you don't end up visiting the prerendered page. [Learn more](#).

Location. To get more geographically relevant information, Chrome gives you the option to share your location with a site. Chrome won't allow a site to access your location without your permission; however, on mobile devices, Chrome automatically shares your location with your default search engine if the Chrome

app has permission to access your location and you haven't blocked geolocation for the associated web site. Chrome uses Google Location Services to estimate your location. The information that Chrome sends to Google Location Services may include:

- The Wi-Fi routers closest to you
- Cell IDs of the cell towers closest to you
- The strength of your Wi-Fi or cell signal
- The IP address that is currently assigned to your device

Google doesn't have control over third-party websites or their privacy practices, so be cautious when sharing your location with a website.

Updates. Chrome periodically sends information to Google to check for updates, get connectivity status, validate the current time, and estimate the number of active users.

Search features. If Google is your default search engine, Chrome contacts Google when you start searching or when you change networks, so you can get the best local web address for sending search queries. If you are signed in to a Google site or signed in to Chrome and Google is your default search engine, searches you perform using the address bar in Chrome are stored in your Google account.

Search prediction service. To help you find information faster, Chrome uses the prediction service provided by your default search engine to offer likely completions to the text you are typing. When you search using the address bar in Chrome, the characters you type (even if you haven't hit "enter" yet) are sent to your default search engine. If Google is your default search engine, predictions are based on your own search history, topics related to what you're typing and what other people are searching for. [Learn more](#). Predictions can also be based on your browsing history. [Learn more](#).

Navigation assistance. When you can't connect to a web page, you can get suggestions for alternative pages similar to the one you're trying to reach. In order to offer you suggestions, Chrome sends Google the URL of the page you're trying to reach.

Autofill and password management. Chrome sends Google limited, anonymous information about the web forms that you encounter, including a hashed URL of the web page and details of the form's structure, so

that we can improve our Autofill and password management services.

Payments. If you are signed in to the Chrome browser and you have credit cards stored in your Google Payments Account, then Chrome will offer you the option of filling those cards into web forms. In addition, if you enter a new credit card into a web form, Chrome will offer to save your credit card and related billing information to your Google Payments account. If you use a card from Google Payments or choose to save your credit card in your Google Payments account for future use, Chrome will collect information about your computer and share it with Google Payments to protect you from fraud. On Android, if supported by the merchant, Chrome will also allow you to pay using Android Pay.

Language. In order to customize your browsing experience based on languages that you prefer to read, Chrome will keep a count of the most popular languages of the sites you visited. This language preference will be sent to Google to customize your experience in Chrome. If you are signed in to Chrome, this language profile will be associated with your Google Account and, if you include Chrome history in your Google Web & App Activity, may be used to personalize your experience in other Google products. [View Activity Controls](#).

Web Apps on Android. On Android devices, if you select “add to homescreen” for a website that has been optimized for [fast, reliable performance on mobile devices](#), then Chrome will use a Google server to create a native Android package for that web site on your device. The Android package allows you to interact with the web app as you would with an Android app. For example, the web app will appear in your list of installed apps. [Learn more](#).

Usage statistics and crash reports. By default, usage statistics and crash reports are sent to Google to help us improve our products. Usage statistics contain information such as preferences, button clicks, and memory usage. In general, usage statistics do not include web page URLs or personal information, but, if you are signed in to Chrome and syncing your browsing history in your Google Account without a Sync passphrase, then Chrome usage statistics include information about the web pages you visit and your usage of them. For example, we may collect statistics to identify web pages that load slowly. We use this information to improve our products and services, and to give web developers insight into improving their pages. Crash reports contain system information at the time of the crash, and may contain web page URLs or personal information, depending on what was happening at the time the crash report was triggered. We may share aggregated, non-personally identifiable information publicly and with partners – like publishers, advertisers or web developers. You can change whether usage statistics and crash reports are sent to

Google at any time. [Learn more](#). If Google Play apps are enabled on your Chromebook and Chrome usage statistics are enabled, then Android diagnostic and usage data is also sent to Google.

Media licenses. Some websites encrypt media to protect against unauthorized access and copying. For HTML5 sites, this key exchange is done using the Encrypted Media Extensions API. In the process of allowing access to this media, session identifiers and licenses may be stored locally. These identifiers can be cleared by the user in Chrome using [Clear Browsing Data](#) with “Media licenses” enabled. For sites that use Adobe Flash Access, Chrome browser for Windows or Chrome OS, provides a unique identifier to content partners and websites. The identifier is stored on your system. You can deny this access in the settings under Content Settings, Protected content, and reset the ID using [Clear Browsing Data](#) with “Media licenses” enabled. If you access HD content on Chrome OS, a content provider may ask Chrome for a certificate to verify the eligibility of the device. To verify your device, your Chromebook will [share data about its hardware attributes](#) with the website, and will use [Verified Access](#) to certify that its cryptographic keys are protected by Chrome hardware. Chrome will prompt you to allow or deny this verification check. [Learn more](#).

Other Google services. This notice describes the Google services that are enabled by default in Chrome. In addition, Chrome may offer other Google web services. For example, if you encounter a page in a different language, Chrome will offer to send the text to Google for translation. You will be notified of your options for controlling these services when you first use them. You can find more information in the [Chrome Privacy Whitepaper](#).

Identifiers in Chrome

Chrome includes a number of identifiers necessary to power features. For example, if you use push messaging, an identifier is created in order to deliver notices to you. Where possible, we use non-unique identifiers and remove identifiers when they are no longer needed. Additionally, the following identifiers help us develop, distribute, and promote Chrome, but are not directly related to a Chrome feature.

- **Installation tracking.** Each copy of the Windows desktop version of the Chrome browser includes a temporary randomly generated installation number that is sent to Google when you install and first use Chrome. This temporary identifier helps us estimate the number of installed browsers, and will be deleted the first time Chrome updates. The mobile version of Chrome uses a variant of the device identifier on an ongoing basis to track the number of installations of Chrome.

- **Promotion tracking.** In order to help us track the success of promotional campaigns, Chrome generates a unique token that is sent to Google when you first run and use the browser. In addition, if you received or reactivated your copy of the desktop version of the Chrome browser as part of a promotional campaign and Google is your default search engine, then searches from the omnibox will include a non-unique promotional tag. All mobile versions of the Chrome browser also include a non-unique promotional tag with searches from the omnibox. Chrome OS may also send a non-unique promotional tag to Google periodically (including during initial setup) and when performing searches with Google. [Learn more](#).
- **Field trials.** We sometimes conduct limited tests of new features. Chrome includes a seed number that is randomly selected on first run to assign browsers to experiment groups. Experiments may also be limited by country (determined by your IP address), operating system, Chrome version, and other parameters. A list of field trials that are currently active on your installation of Chrome is included in all requests sent to Google. [Learn more](#).

Signed-in Chrome mode

When you sign in to the Chrome browser or a Chromebook with your [Google Account](#), your personal browsing data is saved on Google's servers and synced with your account. This type of information can include:

- Browsing history
- Bookmarks
- Tabs
- Passwords and Autofill information
- Other browser settings, like installed extensions

These settings are automatically loaded for you anytime you sign in to Chrome on other computers and devices. To customize the specific information that you synchronize, use the "Settings" menu. [Learn more](#). You can see the amount of Chrome data stored for your Google Account and manage it on the [Chrome Sync Dashboard](#). On the Dashboard, except for Google Accounts created through Family Link, you can also disable synchronization completely and delete all the associated data from Google's servers. [Learn more](#). For children with Google Accounts created in Family Link, sign-in is required and Chrome Sync cannot be disabled because it provides parent management features, such as website restrictions. However, children with these accounts can still delete their data and disable synchronization of most data types. [Learn More](#).

The [Privacy Notice for Google Accounts](#) created in [Family Link](#) applies to Chrome Sync data stored in those accounts.

How Chrome handles your signed-in information

When you sync Chrome with your Google Account, we use your browsing data to improve and personalize your experience within Chrome. You can also personalize your experience on other Google products, by allowing your Chrome history to be included in your Google Web & App Activity. [Learn more](#).

You can change this setting on your [Account History](#) page or [manage your private data](#) whenever you like. If you don't use your Chrome data to personalize your Google experience outside of Chrome, Google will only use your Chrome data after it's anonymized and aggregated with data from other users. Google uses this data to develop new features, products, and services, and to improve the overall quality of existing products and services. If you would like to use Google's cloud to store and sync your Chrome data but you don't want Google to access the data, you can encrypt all of your synced data with your own sync passphrase. [Learn more](#).

Incognito mode and guest mode

You can limit the information Chrome stores on your system by using [incognito mode](#) or [guest mode](#). In these modes, Chrome won't store certain information, such as:

- Basic browsing history information like URLs, cached page text, or IP addresses of pages linked from the websites you visit
- Snapshots of pages that you visit
- Records of your downloads, although the files you download will still be stored elsewhere on your computer or device

How Chrome handles your incognito or guest information

Cookies. Chrome won't share existing cookies with sites you visit in incognito or guest mode. Sites may deposit new [cookies](#) on your system while you are in these modes, but they'll only be stored and transmitted until you close the last incognito or guest window.

Browser configuration changes. When you make changes to your browser configuration, like bookmarking a web page or changing your settings, this information is saved. These changes are not affected by incognito or guest mode.

Permissions. Permissions you grant in incognito mode are not saved to your existing profile.

Profile information. In incognito mode, you will still have access to information from your existing profile, such as suggestions based on your browsing history and saved passwords, while you are browsing. In guest mode, you can browse without seeing information from any existing profiles.

Managing Users in Chrome

Managing users for personal Chrome use

You can set up personalized versions of Chrome for users sharing one device or computer. Note that anyone with access to your device can view all the information in all profiles. To truly protect your data from being seen by others, use the built-in user accounts in your operating system. [Learn more](#).

You can also create a [supervised user](#) in Chrome with your Google Account. If you do, Google will synchronize and store information about the supervised user, like history and other settings, with your Google Account. You can view this information at chrome.com/manage.

Managing users on Chrome for Enterprise

Some Chrome browsers or Chromebooks are managed by a school or company. In that case, the administrator has the ability to apply policies to the browser or Chromebook. Chrome contacts Google to check for these policies when a user first signs in to Chrome or starts browsing without signing in (except in guest mode). Chrome checks periodically for updates to policies.

An administrator can set up a policy for status and activity reporting for Chrome, including location information for Chrome OS devices. Your administrators may also have the ability to access, monitor, use or disclose data accessed from your managed device.

Safe Browsing practices

Google Chrome and certain third-party browsers, like some versions of Mozilla Firefox and Apple's Safari, include Google's Safe Browsing feature. With Safe Browsing, information about suspicious websites is sent and received between the browser you are using and Google's servers.

How Safe Browsing works

Your browser contacts Google's servers periodically to download the most recent "Safe Browsing" list, which contains known phishing and malware sites. The most recent copy of the list is stored locally on your system. Google doesn't collect any account information or other personally identifying information as part of this contact. However, it does receive standard log information, including an IP address and cookies.

Each site you visit is checked against the Safe Browsing list on your system. If there's a match, your browser sends Google a hashed, partial copy of the site's URL so that Google can send more information to your browser. Google cannot determine the real URL from this information. Learn more.

The following Safe Browsing features are specific to Chrome:

- Some versions of Chrome feature Safe Browsing technology that can identify potentially harmful sites and potentially dangerous file types not already known by Google. The full URL of the site or potentially dangerous file might also be sent to Google to help determine whether the site or file is harmful.
- Chrome uses Safe Browsing technology to scan your computer periodically, in order to detect unwanted software that prevents you from changing your settings or otherwise interferes with the security and stability of your browser. Learn more. If this kind of software is detected, Chrome might offer you the option to download the Chrome Cleanup Tool to remove it.
- You can choose to send additional data to help improve Safe Browsing when you access a site that appears to contain malware or when Chrome detects unwanted software on your computer. Learn more.

- If you are a Safe Browsing user and you are syncing your Chrome browsing history to your Google account, then, to improve the safety and utility of web feature permissions, Chrome may anonymously report the domains on which you grant, reject, and revoke permissions, or ignore or dismiss permission prompts.
- You can always choose to disable the Safe Browsing feature within Chrome.

Privacy practices of apps, extensions, themes, services, and other add-ons

You can use apps, extensions, themes, services and other add-ons with Chrome, including some that may be preinstalled or integrated with Chrome. Add-ons developed and provided by Google may communicate with Google servers and are subject to the Google Privacy Policy unless otherwise indicated. Add-ons developed and provided by others are the responsibility of the add-on creators and may have different privacy policies.

Managing add-ons

Before installing an add-on, you should review the requested permissions. Add-ons can have permission to do various things, like:

- Store, access, and share data stored locally or in your Google Drive account
- View and access content on websites you visit
- Use notifications that are sent through Google servers

Chrome can interact with add-ons in a few different ways:

- Checking for updates
- Downloading and installing updates
- Sending usage indicators to Google about the add-ons

Some add-ons might require access to a unique identifier for digital rights management or for delivery of push messaging. You can disable the use of identifiers by removing the add-on from Chrome.

From time to time, Google might discover an add-on that poses a security threat, violates the developer terms for Chrome Web Store, or violates other legal agreements, laws, regulations, or policies. Chrome periodically downloads a list of these dangerous add-ons, in order to remotely disable or remove them from your system.

More information

Information that Google receives when you use Chrome is used and protected under the [Google Privacy Policy](#). Information that other website operators and add-on developers receive, including [cookies](#), is subject to the privacy policies of those websites.

Google adheres to several self regulatory frameworks, including the EU-US Privacy Shield Framework. [Learn more](#).

Definitions

Cookies and similar technologies

A cookie is a small file containing a string of characters that is sent to your computer when you visit a website. When you visit the website again, the cookie allows that site to recognize your browser. Cookies may store user preferences and other information. You can reset your browser to refuse all cookies or to indicate when a cookie is being sent. However, some website features or services may not function properly without cookies. Other technologies are used for similar purposes as a cookie on other platforms where cookies are not available or applicable, such as the Advertising ID available on Android mobile devices. Learn more about [how Google uses cookies](#) and how Google uses data, including cookies, [when you use our partners' sites or apps](#).

Google Account

You may access some of our services by signing up for a [Google Account](#) and providing us with some personal information (typically your name, email address and a password). This account information will be

used to authenticate you when you access Google services and protect your account from unauthorized access by others. You can edit or terminate your account at any time through your Google Account settings.

Server logs

Like most websites, our servers automatically record the page requests made when you visit our sites. These “server logs” typically include your web request, Internet Protocol address, browser type, browser language, the date and time of your request and one or more cookies that may uniquely identify your browser.

Here is an example of a typical log entry where the search is for “cars”, followed by a breakdown of its parts:

```
123.45.67.89 - 25/Mar/2003 10:15:32 -
https://www.google.com/search?q=cars -
Firefox 1.0.7; Windows NT 5.1 - 740674ce2123e969
```

- 123.45.67.89 is the Internet Protocol address assigned to the user by the user's ISP; depending on the user's service, a different address may be assigned to the user by their service provider each time they connect to the Internet;
- 25/Mar/2003 10:15:32 is the date and time of the query;
- https://www.google.com/search?q=cars is the requested URL, including the search query;
- Firefox 1.0.7; Windows NT 5.1 is the browser and operating system being used; and
- 740674ce2123e969 is the unique cookie ID assigned to this particular computer the first time it visited Google. (Cookies can be deleted by users. If the user has deleted the cookie from the computer since the last time s/he visited Google, then it will be the unique cookie ID assigned to the user the next time s/he visits Google from that particular computer).

EXHIBIT 121

**3/6/18
CHROME
PRIVACY
NOTICE**

This is an archived version of the Chrome privacy notice. [View the current privacy notice.](#)

Google Chrome Privacy Notice

Archive date: March 6, 2018

Learn how to control the information that's collected, stored, and shared when you use the Google Chrome browser on your computer or mobile device, ChromeOS, and when you enable Safe Browsing in Chrome. Although this policy describes features that are specific to Chrome, any personal information that is provided to Google or stored in your Google Account will be used and protected in accordance with the [Google Privacy Policy](#).

If you enable Google Play apps on your Chromebook, the use and protection of information collected by Google Play or the Android operating system is governed by the Play Terms of Service and Google Privacy Policy. Details specific to Chrome are provided in this Notice where relevant.

Details about the Privacy Notice

In this Privacy Notice, we use the term "Chrome" to refer to all the products in the Chrome family listed above. If there are differences in our policy between products, we'll point them out.

"Beta," "Dev," or "Canary" versions of Chrome let you test new features still being created in Chrome. This Privacy Notice applies to all versions of Chrome, but might not be up-to-date for features still under development.

For step-by-step guides to managing your privacy preferences, read [this overview of Chrome's privacy controls](#).

Table of contents:

- Safe Browsing policies
 - Policy on using apps, extensions, themes, services, and other add-ons
 - Server log privacy information
 - More information
-

Browser modes

You don't need to provide any personal information to use Chrome, but Chrome has different modes that you can use to change or improve your browsing experience. Privacy practices are different depending on the mode that you're using.

Basic browser mode

The basic browser mode stores information locally on your system. This information might include:

- Browsing history information. For example, Chrome stores the URLs of pages that you visit, a cache of text, images and other resources from those pages, and, if the [network actions prediction](#) feature is turned on, a list of some of the IP addresses linked from those pages.
- Personal information and passwords, to help you fill out forms or sign in to sites you visit.
- A list of permissions that you have granted to websites.
- Thumbnail-sized screenshots of pages that you visit most often.
- [Cookies](#) or data from websites that you visit.
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You can manage this information in several ways:

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Payments. If you are signed in to the Chrome browser and you have credit cards stored in your Google Payments Account, then Chrome will offer you the option of filling those cards into web forms. In addition, if you enter a new credit card into a web form, Chrome will offer to save your credit card and related billing information to your Google Payments account. If you use a card from Google Payments or choose to save your credit card in your Google Payments account for future use, Chrome will collect information about your computer and share it with Google Payments to protect you from fraud. On Android, if supported by the merchant, Chrome will also allow you to pay using Android Pay.

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preferences, button clicks, and memory usage. In general, usage statistics do not include web page URLs or personal information, but, if you are signed in to Chrome and syncing your browsing history in your Google Account without a Sync passphrase, then Chrome usage statistics include information about the web pages you visit and your usage of them. For example, we may collect statistics to identify web pages that load slowly. We use this information to improve our products and services, and to give web developers insight into improving their pages. Crash reports contain system information at the time of the crash, and may contain web page URLs or personal information, depending on what was happening at the time the crash report was triggered. We may share aggregated, non-personally identifiable information publicly and with partners – like publishers, advertisers or web developers. You can change whether usage statistics and crash reports are sent to Google at any time. [Learn more](#). If Google Play apps are enabled on your Chromebook and Chrome usage statistics are enabled, then Android diagnostic and usage data is also sent to Google.

Media licenses. Some websites encrypt media to protect against unauthorized access and copying. For HTML5 sites, this key exchange is done using the Encrypted Media Extensions API. In the process of allowing access to this media, session identifiers and licenses may be stored locally. These identifiers can be cleared by the user in Chrome using [Clear Browsing Data](#) with "Media licenses" enabled. For sites that use Adobe Flash Access, Chrome browser for Windows or ChromeOS, provides a unique identifier to content partners and websites. The identifier is stored on your system. You can deny this access in the settings under Content Settings, Protected content, and reset the ID using [Clear Browsing Data](#) with "Media licenses" enabled. If you access HD content on ChromeOS, a content provider may ask Chrome for a certificate to verify the eligibility of the device. To verify your device, your Chromebook will [share data about its hardware attributes](#) with the website, and will use [Verified Access](#) to certify that its cryptographic keys are protected by Chrome hardware. Chrome will prompt you to allow or deny this verification check. [Learn more](#).

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- Browsing history
- Bookmarks
- Tabs
- Passwords and Autofill information
- Other browser settings, like installed extensions

These settings are automatically loaded for you anytime you sign in to Chrome on other computers and devices. To customize the specific information that you synchronize, use the "Settings" menu. [Learn more](#). You can see the amount of Chrome data stored for your Google Account and manage it on the [Chrome Sync Dashboard](#). On the Dashboard, except for Google Accounts created through Family Link, you can also disable synchronization completely and delete all the associated data from Google's servers. [Learn more](#). For children with Google Accounts created in Family Link, sign-in is required and Chrome Sync cannot be disabled because it provides parent management features, such as website restrictions. However, children with these accounts can still delete their data and disable synchronization of most data types. [Learn More](#). The [Privacy Notice for Google Accounts created in Family Link](#) applies to Chrome Sync data stored in those accounts.

How Chrome handles your signed-in information

When you sync Chrome with your Google Account, we use your browsing data to improve and personalize your experience within Chrome. You can also personalize your experience on other Google products, by allowing your Chrome history to be included in your Google Web & App Activity. [Learn more](#).

You can change this setting on your [Account History](#) page or [manage your private data](#) whenever you like. If you don't use your Chrome data to personalize your Google experience outside of Chrome, Google will only use your Chrome data after it's anonymized and aggregated

use Google's cloud to store and sync your Chrome data but you don't want Google to access the data, you can encrypt all of your synced data with your own sync passphrase. [Learn more](#).

Incognito mode and guest mode

You can limit the information Chrome stores on your system by using [incognito mode or guest mode](#). In these modes, Chrome won't store certain information, such as:

- Basic browsing history information like URLs, cached page text, or IP addresses of pages linked from the websites you visit
- Snapshots of pages that you visit
- Records of your downloads, although the files you download will still be stored elsewhere on your computer or device

How Chrome handles your incognito or guest information

Cookies. Chrome won't share existing cookies with sites you visit in incognito or guest mode.

Sites may deposit new [cookies](#) on your system while you are in these modes, but they'll only be stored and transmitted until you close the last incognito or guest window.

Browser configuration changes. When you make changes to your browser configuration, like bookmarking a web page or changing your settings, this information is saved. These changes are not affected by incognito or guest mode.

Permissions. Permissions you grant in incognito mode are not saved to your existing profile.

Profile information. In incognito mode, you will still have access to information from your existing profile, such as suggestions based on your browsing history and saved passwords, while you are browsing. In guest mode, you can browse without seeing information from any existing profiles.

Managing users in Chrome

Managing users for personal Chrome use

You can set up personalized versions of Chrome for users sharing one device or computer. Note that anyone with access to your device can view all the information in all profiles. To truly protect your data from being seen by others, use the built-in user accounts in your operating system.

[Learn more.](#)

Managing users on Chrome for Enterprise

Some Chrome browsers or Chromebooks are managed by a school or company. In that case, the administrator has the ability to apply policies to the browser or Chromebook. Chrome contacts Google to check for these policies when a user first signs in to Chrome or starts browsing without signing in (except in guest mode). Chrome checks periodically for updates to policies.

An administrator can set up a policy for status and activity reporting for Chrome, including location information for ChromeOS devices. Your administrators may also have the ability to access, monitor, use or disclose data accessed from your managed device.

Safe Browsing practices

Google Chrome and certain third-party browsers, like some versions of Mozilla Firefox and Apple's Safari, include Google's Safe Browsing feature. With Safe Browsing, information about suspicious websites is sent and received between the browser you are using and Google's servers.

How Safe Browsing works

Your browser contacts Google's servers periodically to download the most recent "Safe Browsing" list, which contains known phishing and malware sites. The most recent copy of the

information, including an IP address and cookies.

Each site you visit is checked against the Safe Browsing list on your system. If there's a match, your browser sends Google a hashed, partial copy of the site's URL so that Google can send more information to your browser. Google cannot determine the real URL from this information.

[Learn more](#).

The following Safe Browsing features are specific to Chrome:

- Some versions of Chrome feature Safe Browsing technology that can identify potentially harmful sites and potentially dangerous file types not already known by Google. The full URL of the site or potentially dangerous file might also be sent to Google to help determine whether the site or file is harmful.
- Chrome uses Safe Browsing technology to scan your computer periodically, in order to detect unwanted software that prevents you from changing your settings or otherwise interferes with the security and stability of your browser. [Learn more](#). If this kind of software is detected, Chrome might offer you the option to download the [Chrome Cleanup Tool](#) to remove it.
- You can choose to send additional data to help improve Safe Browsing when you access a site that appears to contain malware or when Chrome detects unwanted software on your computer. [Learn more](#).
- If you use Chrome's password manager, Safe Browsing checks with Google when you enter any saved password on an uncommon page to protect you from phishing attacks. In addition, Safe Browsing protects your Google Account password. If you enter it on a likely phishing site, Chrome will prompt you to change your Google account password. If you sync your browsing history, Chrome will also flag your Google Account as likely phished.
- If you are a Safe Browsing user and you are syncing your Chrome browsing history to your Google account, then, to improve the safety and utility of web feature permissions, Chrome

- You can always choose to [disable the Safe Browsing feature within Chrome](#).
-

Privacy practices of apps, extensions, themes, services, and other add-ons

You can use apps, extensions, themes, services and other add-ons with Chrome, including some that may be preinstalled or integrated with Chrome. Add-ons developed and provided by Google may communicate with Google servers and are subject to the [Google Privacy Policy](#) unless otherwise indicated. Add-ons developed and provided by others are the responsibility of the add-on creators and may have different privacy policies.

Managing add-ons

Before installing an add-on, you should review the requested permissions. Add-ons can have permission to do various things, like:

- Store, access, and share data stored locally or in your Google Drive account
- View and access content on websites you visit
- Use notifications that are sent through Google servers

Chrome can interact with add-ons in a few different ways:

- Checking for updates
- Downloading and installing updates
- Sending usage indicators to Google about the add-ons

Some add-ons might require access to a unique identifier for digital rights management or for delivery of push messaging. You can disable the use of identifiers by removing the add-on from Chrome.

policies. Chrome periodically downloads a list of these dangerous add-ons, in order to remotely disable or remove them from your system.

More information

Information that Google receives when you use Chrome is used and protected under the [Google Privacy Policy](#). Information that other website operators and add-on developers receive, including [cookies](#), is subject to the privacy policies of those websites.

Google adheres to several self regulatory frameworks, including the EU-US Privacy Shield Framework. [Learn more](#).

Definitions

Cookies and similar technologies

A cookie is a small file containing a string of characters that is sent to your computer when you visit a website. When you visit the website again, the cookie allows that site to recognize your browser. Cookies may store user preferences and other information. You can reset your browser to refuse all cookies or to indicate when a cookie is being sent. However, some website features or services may not function properly without cookies. Other technologies are used for similar purposes as a cookie on other platforms where cookies are not available or applicable, such as the Advertising ID available on Android mobile devices. Learn more about [how Google uses cookies](#) and how Google uses data, including cookies, [when you use our partners' sites or apps](#).

Google Account

You may access some of our services by signing up for a [Google Account](#) and providing us with some personal information (typically your name, email address and a password). This account information will be used to authenticate you when you access Google services and protect your



Server logs

Like most websites, our servers automatically record the page requests made when you visit our sites. These "server logs" typically include your web request, Internet Protocol address, browser type, browser language, the date and time of your request and one or more cookies that may uniquely identify your browser.

Here is an example of a typical log entry where the search is for "cars", followed by a breakdown of its parts:

123.45.67.89 - 25/Mar/2003 10:15:32 - <https://www.google.com/search?q=cars> -
Firefox 1.0.7; Windows NT 5.1 - 740674ce2123e969

- 123.45.67.89 is the Internet Protocol address assigned to the user by the user's ISP; depending on the user's service, a different address may be assigned to the user by their service provider each time they connect to the Internet;
- 25/Mar/2003 10:15:32 is the date and time of the query;
- <https://www.google.com/search?q=cars> is the requested URL, including the search query;
- Firefox 1.0.7; Windows NT 5.1 is the browser and operating system being used; and
- 740674ce2123a969 is the unique cookie ID assigned to this particular computer the first time it visited Google. (Cookies can be deleted by users. If the user has deleted the cookie from the computer since the last time s/he visited Google, then it will be the unique cookie ID assigned to the user the next time s/he visits Google from that particular computer).

EXHIBIT 122

**9/24/18
CHROME
PRIVACY
NOTICE**

This is an archived version of the Chrome privacy notice. [View the current privacy notice.](#)

Google Chrome Privacy Notice

Archive date: September 24, 2018

Learn how to control the information that's collected, stored, and shared when you use the Google Chrome browser on your computer or mobile device, ChromeOS, and when you enable Safe Browsing in Chrome. Although this policy describes features that are specific to Chrome, any personal information that is provided to Google or stored in your Google Account will be used and protected in accordance with the [Google Privacy Policy](#).

If you enable Google Play apps on your Chromebook, the use and protection of information collected by Google Play or the Android operating system is governed by the Play Terms of Service and Google Privacy Policy. Details specific to Chrome are provided in this Notice where relevant.

Details about the Privacy Notice

In this Privacy Notice, we use the term "Chrome" to refer to all the products in the Chrome family listed above. If there are differences in our policy between products, we'll point them out.

"Beta," "Dev," or "Canary" versions of Chrome let you test new features still being created in Chrome. This Privacy Notice applies to all versions of Chrome, but might not be up-to-date for features still under development.

For step-by-step guides to managing your privacy preferences, read [this overview of Chrome's privacy controls](#).

Table of contents:

- Safe Browsing policies
 - Policy on using apps, extensions, themes, services, and other add-ons
 - Server log privacy information
 - More information
-

Browser modes

You don't need to provide any personal information to use Chrome, but Chrome has different modes that you can use to change or improve your browsing experience. Privacy practices are different depending on the mode that you're using.

Basic browser mode

The basic browser mode stores information locally on your system. This information might include:

- Browsing history information. For example, Chrome stores the URLs of pages that you visit, a cache of text, images and other resources from those pages, and, if the [network actions prediction](#) feature is turned on, a list of some of the IP addresses linked from those pages.
- Personal information and passwords, to help you fill out forms or sign in to sites you visit.
- A list of permissions that you have granted to websites.
- Thumbnail-sized screenshots of pages that you visit most often.
- [Cookies](#) or data from websites that you visit.
- Data saved by add-ons.

You can manage this information in several ways:

- You can [delete your browsing history information](#).
- You can clear your cookies and site data by visiting the Cookies and Site Data dialog at <chrome://settings/clearBrowserData>.
- You can stop Chrome from [accepting cookies](#) from Google or other sites. [Learn more](#).
- You can review stored passwords in Chrome settings. [Learn more](#).
- You can view and manage your stored Autofill information. [Learn more](#).

The personal information that Chrome stores won't be sent to Google unless you choose to store that data in your [Google Account](#) by turning on Chrome sync. [Learn More](#).

How Chrome handles your information

Information for website operators. Sites that you visit using Chrome will automatically receive [standard log information](#), including your system's IP address and data from [cookies](#) or [similar technologies](#). In general, the fact that you use Chrome to access Google services, such as Gmail, does not cause Google to receive any additional personally identifying information about you. On Google websites and other websites that opt in, if Chrome detects signs that you are being actively attacked by someone on the network (a "man in the middle attack"), Chrome may send information about that connection to Google or the website you visited to help determine the extent of the attack and how the attack functions. Google provides participating website owners with reports about attacks occurring on their sites.

Prerendering. To load web pages faster, Chrome has a setting that can look up the IP addresses of links on a web page and open network connections. Sites and Android apps can also ask the browser to preload the pages you might visit next. Preloading requests from Android apps are controlled by the same setting as Chrome-initiated predictions. But preloading instructions from sites are always performed, regardless of whether Chrome's network prediction feature is

visiting the prerendered page. [Learn more.](#)

Location. To get more geographically relevant information, Chrome gives you the option to share your location with a site. Chrome won't allow a site to access your location without your permission; however, on mobile devices, Chrome automatically shares your location with your default search engine if the Chrome app has permission to access your location and you haven't blocked geolocation for the associated web site. Chrome uses Google Location Services to estimate your location. The information that Chrome sends to Google Location Services may include:

- The Wi-Fi routers closest to you
- Cell IDs of the cell towers closest to you
- The strength of your Wi-Fi or cell signal
- The IP address that is currently assigned to your device

Google doesn't have control over third-party websites or their privacy practices, so be cautious when sharing your location with a website.

Updates. Chrome periodically sends information to Google to check for updates, get connectivity status, validate the current time, and estimate the number of active users.

Search features. If Google is your default search engine, Chrome contacts Google when you start searching or when you change networks, so you can get the best local web address for sending search queries. If you are signed in to a Google site and Google is your default search engine, searches you perform using the address bar in Chrome are stored in your Google account.

Search prediction service. To help you find information faster, Chrome uses the prediction service provided by your default search engine to offer likely completions to the text you are typing. When you search using the address bar in Chrome, the characters you type (even if you haven't hit "enter" yet) are sent to your default search engine. If Google is your default search engine, predictions are based on your own search history, topics related to what you're typing

Navigation assistance. When you can't connect to a web page, you can get suggestions for alternative pages similar to the one you're trying to reach. In order to offer you suggestions, Chrome sends Google the URL of the page you're trying to reach.

Autofill and password management. Chrome sends Google limited, anonymous information about the web forms that you encounter, including a hashed URL of the web page and details of the form's structure, so that we can improve our Autofill and password management services.

Payments. If you have turned on Chrome sync and you have credit cards stored in your Google Payments Account, then Chrome will offer you the option of filling those cards into web forms. In addition, if you enter a new credit card into a web form, Chrome will offer to save your credit card and related billing information to your Google Payments account. If you use a card from Google Payments or choose to save your credit card in your Google Payments account for future use, Chrome will collect information about your computer and share it with Google Payments to protect you from fraud. On Android, if supported by the merchant, Chrome will also allow you to pay using Android Pay.

Language. In order to customize your browsing experience based on languages that you prefer to read, Chrome will keep a count of the most popular languages of the sites you visited. This language preference will be sent to Google to customize your experience in Chrome. If you have turned on Chrome sync, this language profile will be associated with your Google Account and, if you include Chrome history in your Google Web & App Activity, may be used to personalize your experience in other Google products. [View Activity Controls](#).

Web Apps on Android. On Android devices, if you select "add to homescreen" for a website that has been optimized for [fast, reliable performance on mobile devices](#), then Chrome will use a Google server to create a native Android package for that website on your device. The Android package allows you to interact with the web app as you would with an Android app. For example, the web app will appear in your list of installed apps. [Learn more](#).

preferences, button clicks, and memory usage. In general, usage statistics do not include web page URLs or personal information, but, if you are signed in to Chrome and syncing your browsing history in your Google Account without a Sync passphrase, then Chrome usage statistics include information about the web pages you visit and your usage of them. For example, we may collect statistics to identify web pages that load slowly. We use this information to improve our products and services, and to give web developers insight into improving their pages. Crash reports contain system information at the time of the crash, and may contain web page URLs or personal information, depending on what was happening at the time the crash report was triggered. We may share aggregated, non-personally identifiable information publicly and with partners – like publishers, advertisers or web developers. You can change whether usage statistics and crash reports are sent to Google at any time. [Learn more](#). If Google Play apps are enabled on your Chromebook and Chrome usage statistics are enabled, then Android diagnostic and usage data is also sent to Google.

Media licenses. Some websites encrypt media to protect against unauthorized access and copying. For HTML5 sites, this key exchange is done using the Encrypted Media Extensions API. In the process of allowing access to this media, session identifiers and licenses may be stored locally. These identifiers can be cleared by the user in Chrome using [Clear Browsing Data](#) with "Media licenses" enabled. For sites that use Adobe Flash Access, Chrome browser for Windows or ChromeOS, provides a unique identifier to content partners and websites. The identifier is stored on your system. You can deny this access in the settings under Content Settings, Protected content, and reset the ID using [Clear Browsing Data](#) with "Media licenses" enabled. If you access HD content on ChromeOS, a content provider may ask Chrome for a certificate to verify the eligibility of the device. To verify your device, your Chromebook will [share data about its hardware attributes](#) with the website, and will use [Verified Access](#) to certify that its cryptographic keys are protected by Chrome hardware. Chrome will prompt you to allow or deny this verification check. [Learn more](#).

Other Google services. This notice describes the Google services that are enabled by default in Chrome. In addition, Chrome may offer other Google web services. For example, if you encounter a page in a different language, Chrome will offer to send the text to Google for translation. You

Identifiers in Chrome

Chrome includes a number of identifiers necessary to power features. For example, if you use push messaging, an identifier is created in order to deliver notices to you. Where possible, we use non-unique identifiers and remove identifiers when they are no longer needed. Additionally, the following identifiers help us develop, distribute, and promote Chrome, but are not directly related to a Chrome feature.

- **Installation tracking.** Each copy of the Windows desktop version of the Chrome browser includes a temporary randomly generated installation number that is sent to Google when you install and first use Chrome. This temporary identifier helps us estimate the number of installed browsers, and will be deleted the first time Chrome updates. The mobile version of Chrome uses a variant of the device identifier on an ongoing basis to track the number of installations of Chrome.
- **Promotion tracking.** In order to help us track the success of promotional campaigns, Chrome generates a unique token that is sent to Google when you first run and use the browser. In addition, if you received or reactivated your copy of the desktop version of the Chrome browser as part of a promotional campaign and Google is your default search engine, then searches from the omnibox will include a non-unique promotional tag. All mobile versions of the Chrome browser also include a non-unique promotional tag with searches from the omnibox. ChromeOS may also send a non-unique promotional tag to Google periodically (including during initial setup) and when performing searches with Google. [Learn more](#).
- **Field trials.** We sometimes conduct limited tests of new features. Chrome includes a seed number that is randomly selected on first run to assign browsers to experiment groups. Experiments may also be limited by country (determined by your IP address), operating system, Chrome version, and other parameters. A list of field trials that are currently active on your installation of Chrome is included in all requests sent to Google. [Learn more](#).

your personal browsing data is saved on Google's servers and synced with your account. This type of information can include:

- Browsing history
- Bookmarks
- Tabs
- Passwords and Autofill information
- Other browser settings, like installed extensions

These settings are loaded for you anytime you sign in and sync to Chrome on other computers and devices. On desktop versions of Chrome, signing into or out of any Google web service (e.g. google.com) signs you into or out of Chrome. Sync is only enabled if you choose. To customize the specific information that you synchronize, use the "Settings" menu. [Learn more](#). You can see the amount of Chrome data stored for your Google Account and manage it on the [Chrome Sync Dashboard](#). On the Dashboard, except for Google Accounts created through Family Link, you can also disable synchronization completely and delete all the associated data from Google's servers. [Learn more](#). For children with Google Accounts created in Family Link, sign-in is required and Chrome Sync cannot be disabled because it provides parent management features, such as website restrictions. However, children with these accounts can still delete their data and disable synchronization of most data types. [Learn More](#). The [Privacy Notice for Google Accounts created in Family Link](#) applies to Chrome Sync data stored in those accounts.

How Chrome handles your synced information

When you sync Chrome with your Google Account, we use your browsing data to improve and personalize your experience within Chrome. You can also personalize your experience on other Google products, by allowing your Chrome history to be included in your Google Web & App Activity. [Learn more](#).

You can change this setting on your [Account History](#) page or [manage your private data](#) whenever you like. If you don't use your Chrome data to personalize your Google experience

services, and to improve the overall quality of existing products and services. If you would like to use Google's cloud to store and sync your Chrome data but you don't want Google to access the data, you can encrypt all of your synced data with your own sync passphrase. [Learn more.](#)

Incognito mode and guest mode

You can limit the information Chrome stores on your system by using [incognito mode or guest mode](#). In these modes, Chrome won't store certain information, such as:

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Browser configuration changes. When you make changes to your browser configuration, like bookmarking a web page or changing your settings, this information is saved. These changes are not affected by incognito or guest mode.

Permissions. Permissions you grant in incognito mode are not saved to your existing profile.

Profile information. In incognito mode, you will still have access to information from your existing profile, such as suggestions based on your browsing history and saved passwords, while you are browsing. In guest mode, you can browse without seeing information from any existing profiles.

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- You can choose to send additional data to help improve Safe Browsing when you access a site that appears to contain malware or when Chrome detects unwanted software on your computer. [Learn more](#).
- If you use Chrome's password manager, Safe Browsing checks with Google when you enter any saved password on an uncommon page to protect you from phishing attacks. In addition, Safe Browsing protects your Google Account password. If you enter it on a likely phishing site, Chrome will prompt you to change your Google account password. If you sync your browsing history, Chrome will also flag your Google Account as likely phished.
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- You can always choose to [disable the Safe Browsing feature within Chrome](#).
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Definitions

Cookies and similar technologies

A cookie is a small file containing a string of characters that is sent to your computer when you visit a website. When you visit the website again, the cookie allows that site to recognize your browser. Cookies may store user preferences and other information. You can reset your browser to refuse all cookies or to indicate when a cookie is being sent. However, some website features or services may not function properly without cookies. Other technologies are used for similar purposes as a cookie on other platforms where cookies are not available or applicable, such as the Advertising ID available on Android mobile devices. Learn more about [how Google uses cookies](#) and how Google uses data, including cookies, [when you use our partners' sites or apps](#).

Google Account

You may access some of our services by signing up for a [Google Account](#) and providing us with some personal information (typically your name, email address and a password). This account information will be used to authenticate you when you access Google services and protect your



Server logs

Like most websites, our servers automatically record the page requests made when you visit our sites. These "server logs" typically include your web request, Internet Protocol address, browser type, browser language, the date and time of your request and one or more cookies that may uniquely identify your browser.

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Firefox 1.0.7; Windows NT 5.1 - 740674ce2123e969

- 123.45.67.89 is the Internet Protocol address assigned to the user by the user's ISP; depending on the user's service, a different address may be assigned to the user by their service provider each time they connect to the Internet;
- 25/Mar/2003 10:15:32 is the date and time of the query;
- <https://www.google.com/search?q=cars> is the requested URL, including the search query;
- Firefox 1.0.7; Windows NT 5.1 is the browser and operating system being used; and
- 740674ce2123a969 is the unique cookie ID assigned to this particular computer the first time it visited Google. (Cookies can be deleted by users. If the user has deleted the cookie from the computer since the last time s/he visited Google, then it will be the unique cookie ID assigned to the user the next time s/he visits Google from that particular computer).

EXHIBIT 123

**10/24/18
CHROME
PRIVACY
NOTICE**

Go g e Chrome

This is an archived version of the Chrome privacy notice. View the current privacy notice.

Google Chrome Privacy Notice

Archive date: October 24, 2018

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If you enable Google Play apps on your Chromebook, the use and protection of information collected by Google Play or the Android operating system is governed by the Google Play Terms of Service and [Google Privacy Policy](#). Details specific to Chrome are provided in this Notice where relevant.

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Googe Chrome

Table of contents:

- Browser modes
- Managing users in Chrome
- Safe Browsing practices
- Privacy practices of using apps, extensions, themes, services, and other add-ons
- More information

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- Personal information and passwords, to help you fill out forms or sign in to sites you visit.
- A list of permissions that you have granted to websites.

Googe Chrome

- Cookies or data from websites that you visit.
- Data saved by add-ons.
- A record of what you downloaded from websites.

You can manage this information in several ways:

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Googe Chrome

determine the extent of the attack and how the attack functions. Google provides participating website owners with reports about attacks occurring on their sites.

Prerendering. To load web pages faster, Chrome has a setting that can look up the IP addresses of links on a web page and open network connections. Sites and Android apps can also ask the browser to preload the pages you might visit next. Preloading requests from Android apps are controlled by the same setting as Chrome-initiated predictions. But preloading instructions from sites are always performed, regardless of whether Chrome's network prediction feature is enabled. If prerendering is requested, whether by Chrome or by a site or app, the preloaded site is allowed to set and read its own cookies just as if you had visited it, even if you don't end up visiting the prerendered page. [Learn more.](#)

Location. To get more geographically relevant information, Chrome gives you the option to share your location with a site. Chrome won't allow a site to access your location without your permission; however, on mobile devices, Chrome automatically shares your location with your default search engine if the Chrome app has permission to access your location and you haven't blocked geolocation for the associated web site. Chrome uses Google Location Services to estimate your location. The information that Chrome sends to Google Location Services may include:

- The Wi-Fi routers closest to you
- Cell IDs of the cell towers closest to you
- The strength of your Wi-Fi or cell signal
- The IP address that is currently assigned to your device

Google doesn't have control over third-party websites or their privacy practices, so be cautious when sharing your location with a website.

Googe Chrome

users.

Search features. If Google is your default search engine, Chrome contacts Google when you start searching or when you change networks, so you can get the best local web address for sending search queries. If you are signed in to a Google site and Google is your default search engine, searches you perform using the address bar in Chrome are stored in your Google Account.

Search prediction service. To help you find information faster, Chrome uses the prediction service provided by your default search engine to offer likely completions to the text you are typing. When you search using the address bar in Chrome, the characters you type (even if you haven't hit "enter" yet) are sent to your default search engine. If Google is your default search engine, predictions are based on your own search history, topics related to what you're typing and what other people are searching for. [Learn more](#). Predictions can also be based on your browsing history.

[Learn more](#).

Navigation assistance. When you can't connect to a web page, you can get suggestions for alternative pages similar to the one you're trying to reach. In order to offer you suggestions, Chrome sends Google the URL of the page you're trying to reach.

Autofill and password management. Chrome sends Google limited, anonymous information about the web forms that you encounter, including a hashed URL of the web page and details of the form's structure, so that we can improve our Autofill and password management services.

Payments. If you have turned on Chrome sync and you have payment cards saved to your Google Payments account, then Chrome will offer you the option of filling those cards into web forms. In addition, if you enter a new payment card into a web form,

Googe Chrome

account or choose to save your payment card in your Google Payments account for future use, Chrome will collect information about your computer and share it with Google Pay to protect you from fraud and provide the service. If supported by the merchant, Chrome will also allow you to pay using Google Pay.

Language. In order to customize your browsing experience based on the languages that you prefer to read, Chrome will keep a count of the most popular languages of the sites you visit. This language preference will be sent to Google to customize your experience in Chrome. If you have turned on Chrome sync, this language profile will be associated with your Google Account and, if you include Chrome history in your Google Web & App Activity, it may be used to personalize your experience in other Google products. [View Activity Controls.](#)

Web Apps on Android. On Android devices, if you select "add to homescreen" for a website that has been optimized for [fast, reliable performance on mobile devices](#), then Chrome will use a Google server to create a native Android package for that website on your device. The Android package allows you to interact with the web app as you would with an Android app. For example, the web app will appear in your list of installed apps. [Learn more.](#)

Usage statistics and crash reports. By default, usage statistics and crash reports are sent to Google to help us improve our products. Usage statistics contain information such as preferences, button clicks, and memory usage. In general, usage statistics do not include web page URLs or personal information, but, if you are signed in to Chrome and syncing your browsing history in your Google Account without a Sync passphrase, then Chrome usage statistics include information about the web pages you visit and your usage of them. For example, we may collect statistics to identify web pages that load slowly. We use this information to improve our products and services, and to give web developers insight into improving their pages. Crash reports contain system information at the time of the crash, and may contain web page URLs or personal information, depending on what was happening

Go ge Chrome

web developers. You can change whether usage statistics and crash reports are sent to Google at any time. [Learn more](#). If Google Play apps are enabled on your Chromebook and Chrome usage statistics are enabled, then Android diagnostic and usage data is also sent to Google.

Media licenses. Some websites encrypt media to protect against unauthorized access and copying. For HTML5 sites, this key exchange is done using the Encrypted Media Extensions API. In the process of allowing access to this media, session identifiers and licenses may be stored locally. These identifiers can be cleared by the user in Chrome using [Clear Browsing Data](#) with "Media licenses" enabled. For sites that use Adobe Flash Access, Chrome will provide a unique identifier to content partners and websites. The identifier is stored on your system. You can deny this access in the settings under Content Settings, Protected content, and reset the ID using [Clear Browsing Data](#) with "Media licenses" enabled. If you access protected content in Chrome on Android, or access higher quality or offline content on Chrome OS, a content provider may ask Chrome for a certificate to verify the eligibility of the device. Your device will share a site specific identifier with the website to certify that its cryptographic keys are protected by Chrome hardware. Chrome will prompt you to allow or deny this verification check. [Learn more](#).

Other Google services. This notice describes the Google services that are enabled by default in Chrome. In addition, Chrome may offer other Google web services. For example, if you encounter a page in a different language, Chrome will offer to send the text to Google for translation. You will be notified of your options for controlling these services when you first use them. You can find more information in the [Chrome Privacy Whitepaper](#).

Identifiers in Chrome

Chrome includes a number of unique and non-unique identifiers necessary to power features and functional services. For example, if you use push messaging, an identifier is created in order to deliver notices to you. Where possible, we use non-

Go ge Chrome

Chrome, but are not directly related to a Chrome feature.

- **Installation tracking.** Each copy of the Windows desktop version of the Chrome browser includes a temporary randomly generated installation number that is sent to Google when you install and first use Chrome. This temporary identifier helps us estimate the number of installed browsers, and will be deleted the first time Chrome updates. The mobile version of Chrome uses a variant of the device identifier on an ongoing basis to track the number of installations of Chrome.
- **Promotion tracking.** In order to help us track the success of promotional campaigns, Chrome generates a unique token that is sent to Google when you first run and use the browser. In addition, if you received or reactivated your copy of the desktop version of the Chrome browser as part of a promotional campaign and Google is your default search engine, then searches from the omnibox will include a non-unique promotional tag. All mobile versions of the Chrome browser also include a non-unique promotional tag with searches from the omnibox. Chrome OS may also send a non-unique promotional tag to Google periodically (including during initial setup) and when performing searches with Google. [Learn more.](#)
- **Field trials.** We sometimes conduct limited tests of new features. Chrome includes a seed number that is randomly selected on first run to assign browsers to experiment groups. Experiments may also be limited by country (determined by your IP address), operating system, Chrome version, and other parameters. A list of field trials that are currently active on your installation of Chrome is included in all requests sent to Google. [Learn more.](#)

Signed-in, Synced Chrome mode

When you sign in to the Chrome browser or a Chromebook and enable sync with your [Google Account](#), your personal browsing data is saved on Google's servers and

Go ge Chrome

- Browsing history
- Bookmarks
- Tabs
- Passwords and Autofill information
- Other browser settings, like installed extensions

These settings are loaded for you anytime you sign in and sync to Chrome on other computers and devices. On desktop versions of Chrome, signing into or out of any Google web service (e.g. google.com) signs you into or out of Chrome. Chrome synchronization is only enabled if you choose. To customize the specific information that you synchronize, use the "Settings" menu. [Learn more](#). You can see the amount of Chrome data stored for your Google Account and manage it on the [Data from Chrome sync Dashboard](#). On the Dashboard, except for Google Accounts created through Family Link, you can also disable synchronization completely and delete all the associated data from Google's servers. [Learn more](#). For children with Google Accounts created in Family Link, sign-in is required and Chrome sync cannot be disabled because it provides parent management features, such as website restrictions. However, children with these accounts can still delete their data and disable synchronization of most data types. [Learn More](#). The [Privacy Notice for Google Accounts created in Family Link](#) applies to Chrome sync data stored in those accounts.

How Chrome handles your synced information

When you sync Chrome with your Google Account, we use your browsing data to improve and personalize your experience within Chrome. You can also personalize your experience on other Google products, by allowing your Chrome history to be included in your Google Web & App Activity. [Learn more](#).

You can change this setting on your [Account History](#) page or [manage your private data](#) whenever you like. If you don't use your Chrome data to personalize your

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develop new features, products, and services, and to improve the overall quality of existing products and services. If you would like to use Google's cloud to store and sync your Chrome data but you don't want Google to access the data, you can encrypt all of your synced data with your own sync passphrase. [Learn more.](#)

Incognito mode and guest mode

You can limit the information Chrome stores on your system by using [incognito mode](#) or [guest mode](#). In these modes, Chrome won't store certain information, such as:

- Basic browsing history information like URLs, cached page text, or IP addresses of pages linked from the websites you visit
- Snapshots of pages that you visit
- Records of your downloads, although the files you download will still be stored elsewhere on your computer or device

How Chrome handles your incognito or guest information

Cookies. Chrome won't share existing cookies with sites you visit in incognito or guest mode. Sites may deposit new [cookies](#) on your system while you are in these modes, but they'll only be stored and transmitted until you close the last incognito or guest window.

Browser configuration changes. When you make changes to your browser configuration, like bookmarking a web page or changing your settings, this information is saved. These changes are not affected by incognito or guest mode.

Permissions. Permissions you grant in incognito mode are not saved to your existing profile.

Go guest Chrome

passwords, while you are browsing. In guest mode, you can browse without seeing information from any existing profiles.

Managing Users in Chrome

Managing users for personal Chrome use

You can set up personalized versions of Chrome for users sharing one device or computer. Note that anyone with access to your device can view all the information in all profiles. To truly protect your data from being seen by others, use the built-in user accounts in your operating system. [Learn more.](#)

Managing users on Chrome for Enterprise

Some Chrome browsers or Chromebooks are managed by a school or company. In that case, the administrator has the ability to apply policies to the browser or Chromebook. Chrome contacts Google to check for these policies when a user first starts browsing (except in guest mode). Chrome checks periodically for updates to policies.

An administrator can set up a policy for status and activity reporting for Chrome, including location information for Chrome OS devices. Your administrators may also have the ability to access, monitor, use or disclose data accessed from your managed device.

Safe Browsing practices

Google Chrome and certain third-party browsers, like some versions of Mozilla Firefox and Apple's Safari, include Google's Safe Browsing feature. With Safe

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How Safe Browsing works

Your browser contacts Google's servers periodically to download the most recent "Safe Browsing" list, which contains known phishing and malware sites. The most recent copy of the list is stored locally on your system. Google doesn't collect any account information or other personally identifying information as part of this contact. However, it does receive standard log information, including an IP address and cookies.

Each site you visit is checked against the Safe Browsing list on your system. If there's a match, your browser sends Google a hashed, partial copy of the site's URL so that Google can send more information to your browser. Google cannot determine the real URL from this information. [Learn more](#).

The following Safe Browsing features are specific to Chrome:

- Some versions of Chrome feature Safe Browsing technology that can identify potentially harmful sites and potentially dangerous file types not already known by Google. The full URL of the site or potentially dangerous file might also be sent to Google to help determine whether the site or file is harmful.
- Chrome uses Safe Browsing technology to scan your computer periodically, in order to detect unwanted software that prevents you from changing your settings or otherwise interferes with the security and stability of your browser. [Learn more](#). If this kind of software is detected, Chrome might offer you the option to download the [Chrome Cleanup Tool](#) to remove it.
- You can choose to send additional data to help improve Safe Browsing when you access a site that appears to contain malware or when Chrome detects unwanted software on your computer. [Learn more](#).

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from phishing attacks. In addition, Safe Browsing protects your Google Account password. If you enter it on a likely phishing site, Chrome will prompt you to change your Google Account password. If you sync your browsing history, Chrome will also flag your Google Account as likely phished.

- If you are a Safe Browsing user and you are syncing your Chrome browsing history to your Google Account, then, to improve the safety and utility of web feature permissions, Chrome may anonymously report the domains on which you grant, reject, and revoke permissions, or ignore or dismiss permission prompts.
- You can always choose to disable the Safe Browsing feature within Chrome.

Privacy practices of apps, extensions, themes, services, and other add-ons

You can use apps, extensions, themes, services and other add-ons with Chrome, including some that may be preinstalled or integrated with Chrome. Add-ons developed and provided by Google may communicate with Google servers and are subject to the Google Privacy Policy unless otherwise indicated. Add-ons developed and provided by others are the responsibility of the add-on creators and may have different privacy policies.

Managing add-ons

Before installing an add-on, you should review the requested permissions. Add-ons can have permission to do various things, like:

- Store, access, and share data stored locally or in your Google Drive account
- View and access content on websites you visit

Google Chrome

Chrome can interact with add-ons in a few different ways.

- Checking for updates
- Downloading and installing updates
- Sending usage indicators to Google about the add-ons

Some add-ons might require access to a unique identifier for digital rights management or for delivery of push messaging. You can disable the use of identifiers by removing the add-on from Chrome.

From time to time, Google might discover an add-on that poses a security threat, violates the developer terms for Chrome Web Store, or violates other legal agreements, laws, regulations, or policies. Chrome periodically downloads a list of these dangerous add-ons, in order to remotely disable or remove them from your system.

Server Log Privacy Information

Like most websites, our servers automatically record the page requests made when you visit our sites. These "server logs" typically include your web request, Internet Protocol address, browser type, browser language, the date and time of your request and one or more cookies that may uniquely identify your browser.

Here is an example of a typical log entry for where the search is for "cars" looks like this, followed by a breakdown of its parts:

```
123.45.67.89 - 25/Mar/2003 10:15:32 -
https://www.google.com/search?q=cars - Firefox 1.0.7; Windows
NT 5.1 - 740674ce2123e969
```

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assigned to the user by their service provider each time they connect to the Internet.;

- 25/Mar/2003 10:15:32 is the date and time of the query.;
- <https://www.google.com/search?q=cars> is the requested URL, including the search query.;
- Firefox 1.0.7; Windows NT 5.1 is the browser and operating system being used.;
- 740674ce2123a969 is the unique cookie ID that was assigned to this particular computer the first time it visited a Google site. (Cookies can be deleted by users. If the user has deleted the cookie from the computer since the last time they've/s/he visited Google, then it will be the unique cookie ID assigned to their device the user the next time theys/he visits Google from that particular computer).

More information

Information that Google receives when you use Chrome is used and protected under the [Google Privacy Policy](#). Information that other website operators and add-on developers receive, including [cookies](#), is subject to the privacy policies of those websites.

Google adheres to several self regulatory frameworks, including the EU-US Privacy Shield Framework. [Learn more.](#)

Key Terms

Cookies

Go to Google Chrome

that site to recognize your browser. Cookies may store user preferences and other information. You can configure your browser to refuse all cookies or to indicate when a cookie is being sent. However, some website features or services may not function properly without cookies. Learn more about [how Google uses cookies](#) and how Google uses data, including cookies, [when you use our partners' sites or apps](#).

Google Account

You may access some of our services by signing up for a [Google Account](#) and providing us with some personal information (typically your name, email address and a password). This account information is used to authenticate you when you access Google services and protect your account from unauthorized access by others. You can edit or delete your account at any time through your Google Account settings.

EXHIBIT 124

**12/4/18
CHROME
PRIVACY
NOTICE**

Go g e Chrome

This is an archived version of the Chrome privacy notice. View the current privacy notice.

Google Chrome Privacy Notice

Archive date: December 04, 2018

Learn how to control the information that's collected, stored, and shared when you use the Google Chrome browser on your computer or mobile device, Chrome OS, and when you enable Safe Browsing in Chrome. Although this policy describes features that are specific to Chrome, any personal information that is provided to Google or stored in your Google Account will be used and protected in accordance with the [Google Privacy Policy](#), as changed from time to time. [Google's retention policy](#) describes how and why Google retains data.

If you enable Google Play apps on your Chromebook, the use and protection of information collected by Google Play or the Android operating system is governed by the Google Play Terms of Service and [Google Privacy Policy](#). Details specific to Chrome are provided in this Notice where relevant.

Details about the Privacy Notice

In this Privacy Notice, we use the term "Chrome" to refer to all the products in the Chrome family listed above. If there are differences in our policy between products, we'll point them out. We change this Privacy Notice from time to time.

"Beta," "Dev," or "Canary" versions of Chrome let you test new features still being created in Chrome. This Privacy Notice applies to all versions of Chrome, but might not be up-to-date for features still under development.

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Table of contents:

- Browser modes
- Managing users in Chrome
- Safe Browsing practices
- Privacy practices of using apps, extensions, themes, services, and other add-ons
- More information

Browser modes

You don't need to provide any personal information to use Chrome, but Chrome has different modes that you can use to change or improve your browsing experience. Privacy practices are different depending on the mode that you're using.

Basic browser mode

The basic browser mode stores information locally on your system. This information might include:

- Browsing history information. For example, Chrome stores the URLs of pages that you visit, a cache of text, images and other resources from those pages, and, if the network actions prediction feature is turned on, a list of some of the IP addresses linked from those pages.
- Personal information and passwords, to help you fill out forms or sign in to sites you visit.
- A list of permissions that you have granted to websites.

Googe Chrome

- Cookies or data from websites that you visit.
- Data saved by add-ons.
- A record of what you downloaded from websites.

You can manage this information in several ways:

- You can delete your browsing history information.
- You can manage or delete stored browsing data from the Cookies and Site Data dialog.
- You can stop Chrome from accepting cookies. Learn more.
- You can review stored passwords in Chrome settings. Learn more.
- You can view and manage your stored Autofill information. Learn more.

The personal information that Chrome stores won't be sent to Google unless you choose to store that data in your Google Account by turning on Chrome sync. Learn More.

How Chrome handles your information

Information for website operators. Sites that you visit using Chrome will automatically receive standard log information, including your system's IP address and data from cookies or similar technologies. In general, the fact that you use Chrome to access Google services, such as Gmail, does not cause Google to receive any additional personally identifying information about you. On Google websites and other websites that opt in, if Chrome detects signs that you are being actively

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determine the extent of the attack and how the attack functions. Google provides participating website owners with reports about attacks occurring on their sites.

Prerendering. To load web pages faster, Chrome has a setting that can look up the IP addresses of links on a web page and open network connections. Sites and Android apps can also ask the browser to preload the pages you might visit next. Preloading requests from Android apps are controlled by the same setting as Chrome-initiated predictions. But preloading instructions from sites are always performed, regardless of whether Chrome's network prediction feature is enabled. If prerendering is requested, whether by Chrome or by a site or app, the preloaded site is allowed to set and read its own cookies just as if you had visited it, even if you don't end up visiting the prerendered page. [Learn more.](#)

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Payments. If you have turned on Chrome sync and you have payment cards saved to your Google Payments account, then Chrome will offer you the option of filling those cards into web forms. If you have cards saved locally in Chrome, Chrome will prompt you to save them to your Google Payments account. (Cards are saved locally when you're not syncing or if you add a card from the "Add" button in Chrome

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Payments account. If you use a payment card from your Google Payments account or choose to save your payment card in your Google Payments account for future use, Chrome will collect information about your computer and share it with Google Pay to protect you from fraud and provide the service. If supported by the merchant, Chrome will also allow you to pay using Google Pay.

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Usage statistics and crash reports. By default, usage statistics and crash reports are sent to Google to help us improve our products. Usage statistics contain information such as preferences, button clicks, and memory usage. In general, usage statistics do not include web page URLs or personal information, but, if you are signed in to Chrome and syncing your browsing history in your Google Account without a Sync passphrase, then Chrome usage statistics include information about the web pages you visit and your usage of them. For example, we may collect statistics to identify web pages that load slowly. We use this information to improve our products and services, and to give web developers insight into improving their pages. Crash reports contain system information at the time of the crash, and may

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identifiable information publicly and with partners – like publishers, advertisers or web developers. You can change whether usage statistics and crash reports are sent to Google at any time. [Learn more](#). If Google Play apps are enabled on your Chromebook and Chrome usage statistics are enabled, then Android diagnostic and usage data is also sent to Google.

Media licenses. Some websites encrypt media to protect against unauthorized access and copying. For HTML5 sites, this key exchange is done using the Encrypted Media Extensions API. In the process of allowing access to this media, session identifiers and licenses may be stored locally. These identifiers can be cleared by the user in Chrome using [Clear Browsing Data](#) with "Media licenses" enabled. For sites that use Adobe Flash Access, Chrome will provide a unique identifier to content partners and websites. The identifier is stored on your system. You can deny this access in the settings under Content Settings, Protected content, and reset the ID using [Clear Browsing Data](#) with "Media licenses" enabled. If you access protected content in Chrome on Android, or access higher quality or offline content on Chrome OS, a content provider may ask Chrome for a certificate to verify the eligibility of the device. Your device will share a site specific identifier with the website to certify that its cryptographic keys are protected by Chrome hardware. Chrome will prompt you to allow or deny this verification check. [Learn more](#).

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- **Field trials.** We sometimes conduct limited tests of new features. Chrome includes a seed number that is randomly selected on first run to assign browsers to experiment groups. Experiments may also be limited by country (determined by your IP address), operating system, Chrome version, and other parameters. A list of field trials that are currently active on your installation of Chrome is included in all requests sent to Google. [Learn more.](#)

Signed-in, Synced Chrome mode

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synced with your account. This personal information will be used and protected in accordance with the [Google Privacy Policy](#). This type of information can include:

- Browsing history
- Bookmarks
- Tabs
- Passwords and Autofill information
- Other browser settings, like installed extensions

These settings are loaded for you anytime you sign in and sync to Chrome on other computers and devices. On desktop versions of Chrome, signing into or out of any Google web service (e.g. google.com) signs you into or out of Chrome. Chrome synchronization is only enabled if you choose. To customize the specific information that you synchronize, use the "Settings" menu. [Learn more](#). You can see the amount of Chrome data stored for your Google Account and manage it on the [Data from Chrome sync Dashboard](#). On the Dashboard, except for Google Accounts created through Family Link, you can also disable synchronization completely and delete all the associated data from Google's servers. [Learn more](#). For children with Google Accounts created in Family Link, sign-in is required and Chrome sync cannot be disabled because it provides parent management features, such as website restrictions. However, children with these accounts can still delete their data and disable synchronization of most data types. [Learn More](#). The [Privacy Notice for Google Accounts created in Family Link](#) applies to Chrome sync data stored in those accounts.

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When you sync Chrome with your Google Account, we use your browsing data to improve and personalize your experience within Chrome. You can also personalize your experience on other Google products, by allowing your Chrome history to be included in your Google Web & App Activity. [Learn more](#).

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Google experience outside of Chrome, Google will only use your Chrome data after it's anonymized and aggregated with data from other users. Google uses this data to develop new features, products, and services, and to improve the overall quality of existing products and services. If you would like to use Google's cloud to store and sync your Chrome data but you don't want Google to access the data, you can encrypt all of your synced data with your own sync passphrase. [Learn more.](#)

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How Safe Browsing works

Your browser contacts Google's servers periodically to download the most recent "Safe Browsing" list, which contains known phishing and malware sites. The most recent copy of the list is stored locally on your system. Google doesn't collect any account information or other personally identifying information as part of this contact. However, it does receive standard log information, including an IP address and cookies.

Each site you visit is checked against the Safe Browsing list on your system. If there's a match, your browser sends Google a hashed, partial copy of the site's URL so that Google can send more information to your browser. Google cannot determine the real URL from this information. [Learn more](#).

The following Safe Browsing features are specific to Chrome:

- Some versions of Chrome feature Safe Browsing technology that can identify potentially harmful sites and potentially dangerous file types not already known by Google. The full URL of the site or potentially dangerous file might also be sent to Google to help determine whether the site or file is harmful.
- Chrome uses Safe Browsing technology to scan your computer periodically, in order to detect unwanted software that prevents you from changing your settings or otherwise interferes with the security and stability of your browser. [Learn more](#). If this kind of software is detected, Chrome might offer you the option to download the [Chrome Cleanup Tool](#) to remove it.
- You can choose to send additional data to help improve Safe Browsing when you access a site that appears to contain malware or when Chrome detects unwanted software on your computer. [Learn more](#).

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from phishing attacks. In addition, Safe Browsing protects your Google Account password. If you enter it on a likely phishing site, Chrome will prompt you to change your Google Account password. If you sync your browsing history, Chrome will also flag your Google Account as likely phished.

- If you are a Safe Browsing user and you are syncing your Chrome browsing history to your Google Account, then, to improve the safety and utility of web feature permissions, Chrome may anonymously report the domains on which you grant, reject, and revoke permissions, or ignore or dismiss permission prompts.
- You can always choose to disable the Safe Browsing feature within Chrome.

Privacy practices of apps, extensions, themes, services, and other add-ons

You can use apps, extensions, themes, services and other add-ons with Chrome, including some that may be preinstalled or integrated with Chrome. Add-ons developed and provided by Google may communicate with Google servers and are subject to the Google Privacy Policy unless otherwise indicated. Add-ons developed and provided by others are the responsibility of the add-on creators and may have different privacy policies.

Managing add-ons

Before installing an add-on, you should review the requested permissions. Add-ons can have permission to do various things, like:

- Store, access, and share data stored locally or in your Google Drive account
- View and access content on websites you visit

Google Chrome

Chrome can interact with add-ons in a few different ways.

- Checking for updates
- Downloading and installing updates
- Sending usage indicators to Google about the add-ons

Some add-ons might require access to a unique identifier for digital rights management or for delivery of push messaging. You can disable the use of identifiers by removing the add-on from Chrome.

From time to time, Google might discover an add-on that poses a security threat, violates the developer terms for Chrome Web Store, or violates other legal agreements, laws, regulations, or policies. Chrome periodically downloads a list of these dangerous add-ons, in order to remotely disable or remove them from your system.

Server Log Privacy Information

Like most websites, our servers automatically record the page requests made when you visit our sites. These "server logs" typically include your web request, Internet Protocol address, browser type, browser language, the date and time of your request and one or more cookies that may uniquely identify your browser.

Here is an example of a typical log entry for where the search is for "cars" looks like this, followed by a breakdown of its parts:

```
123.45.67.89 - 25/Mar/2003 10:15:32 -
https://www.google.com/search?q=cars - Firefox 1.0.7; Windows
NT 5.1 - 740674ce2123e969
```

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assigned to the user by their service provider each time they connect to the Internet.;

- 25/Mar/2003 10:15:32 is the date and time of the query.;
- <https://www.google.com/search?q=cars> is the requested URL, including the search query.;
- Firefox 1.0.7; Windows NT 5.1 is the browser and operating system being used.;
- 740674ce2123a969 is the unique cookie ID that was assigned to this particular computer the first time it visited a Google site. (Cookies can be deleted by users. If the user has deleted the cookie from the computer since the last time they've/s/he visited Google, then it will be the unique cookie ID assigned to their device the user the next time theys/he visits Google from that particular computer).

More information

Information that Google receives when you use Chrome is used and protected under the [Google Privacy Policy](#). Information that other website operators and add-on developers receive, including [cookies](#), is subject to the privacy policies of those websites.

Google adheres to several self regulatory frameworks, including the EU-US Privacy Shield Framework. [Learn more.](#)

Key Terms

Cookies

Go to Google Chrome

that site to recognize your browser. Cookies may store user preferences and other information. You can configure your browser to refuse all cookies or to indicate when a cookie is being sent. However, some website features or services may not function properly without cookies. Learn more about [how Google uses cookies](#) and how Google uses data, including cookies, [when you use our partners' sites or apps](#).

Google Account

You may access some of our services by signing up for a [Google Account](#) and providing us with some personal information (typically your name, email address and a password). This account information is used to authenticate you when you access Google services and protect your account from unauthorized access by others. You can edit or delete your account at any time through your Google Account settings.

EXHIBIT 125

**1/30/19
CHROME
PRIVACY
NOTICE**

Go g e Chrome

This is an archived version of the Chrome privacy notice. View the current privacy notice.

Google Chrome Privacy Notice

Archive date: January 30, 2019

Learn how to control the information that's collected, stored, and shared when you use the Google Chrome browser on your computer or mobile device, Chrome OS, and when you enable Safe Browsing in Chrome. Although this policy describes features that are specific to Chrome, any personal information that is provided to Google or stored in your Google Account will be used and protected in accordance with the [Google Privacy Policy](#), as changed from time to time. [Google's retention policy](#) describes how and why Google retains data.

If Google Play apps have been enabled on your Chromebook, the use and protection of information collected by Google Play or the Android operating system is governed by the [Google Play Terms of Service](#) and [Google Privacy Policy](#). Details specific to Chrome are provided in this Notice where relevant.

Details about the Privacy Notice

In this Privacy Notice, we use the term "Chrome" to refer to all the products in the Chrome family listed above. If there are differences in our policy between products, we'll point them out. We change this Privacy Notice from time to time.

"Beta," "Dev," or "Canary" versions of Chrome let you test new features still being created in Chrome. This Privacy Notice applies to all versions of Chrome, but might not be up-to-date for features still under development.

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Table of contents:

- Browser modes
- Managing users in Chrome
- Safe Browsing practices
- Privacy practices of using apps, extensions, themes, services, and other add-ons
- More information

Browser modes

You don't need to provide any personal information to use Chrome, but Chrome has different modes that you can use to change or improve your browsing experience. Privacy practices are different depending on the mode that you're using.

Basic browser mode

The basic browser mode stores information locally on your system. This information might include:

- Browsing history information. For example, Chrome stores the URLs of pages that you visit, a cache of text, images and other resources from those pages, and, if the network actions prediction feature is turned on, a list of some of the IP addresses linked from those pages.
- Personal information and passwords, to help you fill out forms or sign in to sites you visit.
- A list of permissions that you have granted to websites.

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- Cookies or data from websites that you visit.
- Data saved by add-ons.
- A record of what you downloaded from websites.

You can manage this information in several ways:

- You can delete your browsing history information.
- You can manage or delete stored browsing data from the Cookies and Site Data dialog.
- You can stop Chrome from accepting cookies. Learn more.
- You can review stored passwords in Chrome settings. Learn more.
- You can view and manage your stored Autofill information. Learn more.

The personal information that Chrome stores won't be sent to Google unless you choose to store that data in your Google Account by turning on sync, or, in the case of payment cards and billing information, choosing specific payment card and billing information to store in your Google Payments account. Learn More.

How Chrome handles your information

Information for website operators. Sites that you visit using Chrome will automatically receive standard log information, including your system's IP address and data from cookies. In general, the fact that you use Chrome to access Google services, such as Gmail, does not cause Google to receive any additional personally identifying information about you. On Google websites and other websites that opt

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connection to Google or the website you visited to help determine the extent of the attack and how the attack functions. Google provides participating website owners with reports about attacks occurring on their sites.

Prerendering. To load web pages faster, Chrome has a setting that can look up the IP addresses of links on a web page and open network connections. Sites and Android apps can also ask the browser to preload the pages you might visit next. Preloading requests from Android apps are controlled by the same setting as Chrome-initiated predictions. But preloading instructions from sites are always performed, regardless of whether Chrome's network prediction feature is enabled. If prerendering is requested, whether by Chrome or by a site or app, the preloaded site is allowed to set and read its own cookies just as if you had visited it, even if you don't end up visiting the prerendered page. [Learn more.](#)

Location. To get more geographically relevant information, Chrome gives you the option to share your location with a site. Chrome won't allow a site to access your location without your permission; however, on mobile devices, Chrome automatically shares your location with your default search engine if the Chrome app has permission to access your location and you haven't blocked geolocation for the associated web site. Chrome uses Google Location Services to estimate your location. The information that Chrome sends to Google Location Services may include:

- The Wi-Fi routers closest to you
- Cell IDs of the cell towers closest to you
- The strength of your Wi-Fi or cell signal
- The IP address that is currently assigned to your device

Google doesn't have control over third-party websites or their privacy practices, so be cautious when sharing your location with a website.

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users.

Search features. If you are signed in to a Google site and Google is your default search engine, searches you perform using the address bar in Chrome are stored in your Google Account.

Search prediction service. To help you find information faster, Chrome uses the prediction service provided by your default search engine to offer likely completions to the text you are typing. When you search using the address bar in Chrome, the characters you type (even if you haven't hit "enter" yet) are sent to your default search engine. If Google is your default search engine, predictions are based on your own search history, topics related to what you're typing and what other people are searching for. [Learn more](#). Predictions can also be based on your browsing history.

[Learn more](#).

Navigation assistance. When you can't connect to a web page, you can get suggestions for alternative pages similar to the one you're trying to reach. In order to offer you suggestions, Chrome sends Google the URL of the page you're trying to reach.

Autofill and password management. In order to improve Chrome's Autofill and password management services, Chrome sends Google limited, anonymous information about the web forms that you encounter or submit while Autofill or password management is enabled, including a hashed URL of the web page and details of the form's structure. [Learn more](#).

Payments. When you are signed into Chrome with your Google account, Chrome may offer to save payment cards and related billing information to your Google Payments account. Chrome may also offer you the option of filling payment cards from your Google Payments account into web forms. If you have cards saved locally

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your payment card in your Google Payments account for future use, Chrome will collect information about your computer and share it with Google Pay to protect you from fraud and provide the service. If supported by the merchant, Chrome will also allow you to pay using Google Pay.

Language. In order to customize your browsing experience based on the languages that you prefer to read, Chrome will keep a count of the most popular languages of the sites you visit. This language preference will be sent to Google to customize your experience in Chrome. If you have turned on Chrome sync, this language profile will be associated with your Google Account and, if you include Chrome history in your Google Web & App Activity, it may be used to personalize your experience in other Google products. [View Activity Controls.](#)

Web Apps on Android. On Android devices, if you select "add to homescreen" for a website that has been optimized for [fast, reliable performance on mobile devices](#), then Chrome will use a Google server to create a native Android package for that website on your device. The Android package allows you to interact with the web app as you would with an Android app. For example, the web app will appear in your list of installed apps. [Learn more.](#)

Usage statistics and crash reports. By default, usage statistics and crash reports are sent to Google to help us improve our products. Usage statistics contain information such as preferences, button clicks, and memory usage. In general, usage statistics do not include web page URLs or personal information, but, if you are signed in to Chrome and syncing your browsing history in your Google Account without a Sync passphrase, then Chrome usage statistics include information about the web pages you visit and your usage of them. For example, we may collect statistics to identify web pages that load slowly. We use this information to improve our products and services, and to give web developers insight into improving their pages. Crash reports contain system information at the time of the crash, and may contain web page URLs or personal information, depending on what was happening

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web developers. You can change whether usage statistics and crash reports are sent to Google at any time. [Learn more](#). If Google Play apps are enabled on your Chromebook and Chrome usage statistics are enabled, then Android diagnostic and usage data is also sent to Google.

Media licenses. Some websites encrypt media to protect against unauthorized access and copying. For HTML5 sites, this key exchange is done using the Encrypted Media Extensions API. In the process of allowing access to this media, session identifiers and licenses may be stored locally. These identifiers can be cleared by the user in Chrome using [Clear Browsing Data](#) with "Media licenses" enabled. For sites that use Adobe Flash Access, Chrome will provide a unique identifier to content partners and websites. The identifier is stored on your system. You can deny this access in the settings under Content Settings, Protected content, and reset the ID using [Clear Browsing Data](#) with "Media licenses" enabled. If you access protected content in Chrome on Android, or access higher quality or offline content on Chrome OS, a content provider may ask Chrome for a certificate to verify the eligibility of the device. Your device will share a site specific identifier with the website to certify that its cryptographic keys are protected by Chrome hardware. Chrome will prompt you to allow or deny this verification check. [Learn more](#).

Other Google services. This notice describes the Google services that are enabled by default in Chrome. In addition, Chrome may offer other Google web services. For example, if you encounter a page in a different language, Chrome will offer to send the text to Google for translation. You will be notified of your options for controlling these services when you first use them. You can find more information in the [Chrome Privacy Whitepaper](#).

Identifiers in Chrome

Chrome includes a number of unique and non-unique identifiers necessary to power features and functional services. For example, if you use push messaging, an identifier is created in order to deliver notices to you. Where possible, we use non-

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Chrome, but are not directly related to a Chrome feature.

- **Installation tracking.** Each copy of the Windows desktop version of the Chrome browser includes a temporary randomly generated installation number that is sent to Google when you install and first use Chrome. This temporary identifier helps us estimate the number of installed browsers, and will be deleted the first time Chrome updates. The mobile version of Chrome uses a variant of the device identifier on an ongoing basis to track the number of installations of Chrome.
- **Promotion tracking.** In order to help us track the success of promotional campaigns, Chrome generates a unique token that is sent to Google when you first run and use the browser. In addition, if you received or reactivated your copy of the desktop version of the Chrome browser as part of a promotional campaign and Google is your default search engine, then searches from the omnibox will include a non-unique promotional tag. All mobile versions of the Chrome browser also include a non-unique promotional tag with searches from the omnibox. Chrome OS may also send a non-unique promotional tag to Google periodically (including during initial setup) and when performing searches with Google. [Learn more.](#)
- **Field trials.** We sometimes conduct limited tests of new features. Chrome includes a seed number that is randomly selected on first run to assign browsers to experiment groups. Experiments may also be limited by country (determined by your IP address), operating system, Chrome version, and other parameters. A list of field trials that are currently active on your installation of Chrome is included in all requests sent to Google. [Learn more.](#)

Sign-in and Sync Chrome modes

You also have the option to use the Chrome browser while signed in to your Google Account, with or without sync enabled.

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this off in settings. [Learn more](#). If you are signed in to your Google Account on desktop, Chrome may offer to save your payment cards and related billing information to your Google Payments account. This personal information will be used and protected in accordance with the [Google Privacy Policy](#).

Sync. When you sign in to the Chrome browser or a Chromebook and enable sync with your [Google Account](#), your personal information is saved in your Google Account on Google's servers so you may access it when you sign in and sync to Chrome on other computers and devices. This personal information will be used and protected in accordance with the [Google Privacy Policy](#). This type of information can include:

- Browsing history
- Bookmarks
- Tabs
- Passwords and Autofill information
- Other browser settings, like installed extensions

Sync is only enabled if you choose. [Learn More](#). To customize the specific information that you have enabled to sync, use the "Settings" menu. [Learn more](#). You can see the amount of Chrome data stored for your Google Account and manage it on the [Data from Chrome sync Dashboard](#). On the Dashboard, except for Google Accounts created through Family Link, you can also disable sync and delete all the associated data from Google's servers. [Learn more](#). For Google Accounts created in Family Link, sign-in is required and sync cannot be disabled because it provides parent management features, such as website restrictions. However, children with Family Link accounts can still delete their data and disable synchronization of most data types. [Learn More](#). The [Privacy Notice for Google Accounts created in Family Link](#) applies to Chrome sync data stored in those accounts.

How Chrome handles your synced information

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your experience on other Google products, by allowing your Chrome history to be included in your Google Web & App Activity. [Learn more.](#)

You can change this setting on your [Account History page](#) or [manage your private data](#) whenever you like. If you don't use your Chrome data to personalize your Google experience outside of Chrome, Google will only use your Chrome data after it's anonymized and aggregated with data from other users. Google uses this data to develop new features, products, and services, and to improve the overall quality of existing products and services. If you would like to use Google's cloud to store and sync your Chrome data but you don't want Google to access the data, you can encrypt your synced Chrome data with your own sync passphrase. [Learn more.](#)

Incognito mode and guest mode

You can limit the information Chrome stores on your system by using [incognito mode](#) or [guest mode](#). In these modes, Chrome won't store certain information, such as:

- Basic browsing history information like URLs, cached page text, or IP addresses of pages linked from the websites you visit
- Snapshots of pages that you visit
- Records of your downloads, although the files you download will still be stored elsewhere on your computer or device

How Chrome handles your incognito or guest information

Cookies. Chrome won't share existing cookies with sites you visit in incognito or guest mode. Sites may deposit new [cookies](#) on your system while you are in these modes, but they'll only be stored and transmitted until you close the last incognito or guest window.

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information is saved. These changes are not affected by incognito or guest mode.

Permissions. Permissions you grant in incognito mode are not saved to your existing profile.

Profile information. In incognito mode, you will still have access to information from your existing profile, such as suggestions based on your browsing history and saved passwords, while you are browsing. In guest mode, you can browse without seeing information from any existing profiles.

Managing Users in Chrome

Managing users for personal Chrome use

You can set up personalized versions of Chrome for users sharing one device or computer. Note that anyone with access to your device can view all the information in all profiles. To truly protect your data from being seen by others, use the built-in user accounts in your operating system. [Learn more.](#)

Managing users on Chrome for Enterprise

Some Chrome browsers or Chromebooks are managed by a school or company. In that case, the administrator has the ability to apply policies to the browser or Chromebook. Chrome contacts Google to check for these policies when a user first starts browsing (except in guest mode). Chrome checks periodically for updates to policies.

An administrator can set up a policy for status and activity reporting for Chrome, including location information for Chrome OS devices. Your administrators may also

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Safe Browsing practices

Google Chrome and certain third-party browsers, like some versions of Mozilla Firefox and Apple's Safari, include Google's Safe Browsing feature. With Safe Browsing, information about suspicious websites is sent and received between the browser you are using and Google's servers.

How Safe Browsing works

Your browser contacts Google's servers periodically to download the most recent "Safe Browsing" list, which contains known phishing and malware sites. The most recent copy of the list is stored locally on your system. Google doesn't collect any account information or other personally identifying information as part of this contact. However, it does receive standard log information, including an IP address and cookies.

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settings or otherwise interferes with the security and stability of your browser. [Learn more](#). If this kind of software is detected, Chrome might offer you the option to download the [Chrome Cleanup Tool](#) to remove it.

- You can choose to send additional data to help improve Safe Browsing when you access a site that appears to contain malware or when Chrome detects unwanted software on your computer. [Learn more](#).
- If you use Chrome's password manager, Safe Browsing checks with Google when you enter any saved password on an uncommon page to protect you from phishing attacks. Chrome does not send your passwords to Google as part of this protection. In addition, Safe Browsing protects your Google Account password. If you enter it on a likely phishing site, Chrome will prompt you to change your Google Account password. If you sync your browsing history, Chrome will also flag your Google Account as likely phished.
- If you are a Safe Browsing user and you are syncing your Chrome browsing history to your Google Account, then, to improve the safety and utility of web feature permissions, Chrome may anonymously report the domains on which you grant, reject, and revoke permissions, or ignore or dismiss permission prompts.
- You can always choose to [disable the Safe Browsing feature within Chrome](#).

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different privacy policies.

Managing add-ons

Before installing an add-on, you should review the requested permissions. Add-ons can have permission to do various things, like:

- Store, access, and share data stored locally or in your Google Drive account
- View and access content on websites you visit
- Use notifications that are sent through Google servers

Chrome can interact with add-ons in a few different ways:

- Checking for updates
- Downloading and installing updates
- Sending usage indicators to Google about the add-ons

Some add-ons might require access to a unique identifier for digital rights management or for delivery of push messaging. You can disable the use of identifiers by removing the add-on from Chrome.

From time to time, Google might discover an add-on that poses a security threat, violates the developer terms for Chrome Web Store, or violates other legal agreements, laws, regulations, or policies. Chrome periodically downloads a list of these dangerous add-ons, in order to remotely disable or remove them from your system.

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```
123.45.67.89 - 25/Mar/2003 10:15:32 -
https://www.google.com/search?q=cars - Firefox 1.0.7; Windows
NT 5.1 - 740674ce2123e969
```

- 123.45.67.89 is the Internet Protocol address assigned to the user by the user's ISP. D; depending on the user's service, a different address may be assigned to the user by their service provider each time they connect to the Internet.;
- 25/Mar/2003 10:15:32 is the date and time of the query.;
- https://www.google.com/search?q=cars is the requested URL, including the search query.;
- Firefox 1.0.7; Windows NT 5.1 is the browser and operating system being used.;
- 740674ce2123a969 is the unique cookie ID that was assigned to this particular computer the first time it visited a Google site. (Cookies can be deleted by users. If the user has deleted the cookie from the computer since the last time they've/s/he visited Google, then it will be the unique cookie ID assigned to their device the user the next time theys/he visits Google from that particular computer).

More information

Information that Google receives when you use Chrome is used and protected under the [Google Privacy Policy](#). Information that other website operators and add-on developers receive, including [cookies](#), is subject to the privacy policies of those websites.

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service in the Google Chrome Terms of Service shall be the data controller responsible for your information and responsible for processing your information and complying with applicable privacy laws.

Key Terms

Cookies

A cookie is a small file containing a string of characters that is sent to your computer when you visit a website. When you visit the site again, the cookie allows that site to recognize your browser. Cookies may store user preferences and other information. You can configure your browser to refuse all cookies or to indicate when a cookie is being sent. However, some website features or services may not function properly without cookies. Learn more about how Google uses cookies and how Google uses data, including cookies, when you use our partners' sites or apps.

Google Account

You may access some of our services by signing up for a Google Account and providing us with some personal information (typically your name, email address and a password). This account information is used to authenticate you when you access Google services and protect your account from unauthorized access by others. You can edit or delete your account at any time through your Google Account settings.